Assessment and Treatment of Adolescents with Intellectual Disabilities Who Exhibit Sexual Problems or Offending Behaviors

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Assessment and Treatment of Adolescents with Intellectual Disabilities Who Exhibit Sexual Problems or Offending Behaviors

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The Association for the Treatment of Sexual Abusers is an international, multi-disciplinary organization dedicated to preventing sexual abuse. Through research, education, and shared learning ATSA promotes evidence-based practice, public policy, and community strategies that lead to the effective assessment, treatment, and management of individuals who have sexually abused or are at risk to abuse.

ATSA is an association of individuals from around the world committed to achieving a high level of professional excellence. ATSA promotes the philosophy that empirically based assessment, practice, management, and policy strategies will: enhance community safety, reduce sexual recidivism, protect victims and vulnerable populations, transform the lives of those caught in the web of sexual violence, and illuminate paths to prevent sexual abuse.

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Readers will notice that this document is, by its brevity, not all-inclusive, but there are many resources noted in the body of this packet that provide additional information to practitioners. It is beyond the scope of this informational packet to be exhaustive on any one topic, and this certainly may be said of each section herein. It is hoped that each section will pique readers' interest regarding issues relevant to working with intellectually disabled adolescents who exhibit sexual problems or engage in offending behaviors, in addition to providing references and resources that will help enrich their knowledge and practice repertoire.

EXECUTIVE SUMMARY

The assessment, treatment, supervision, and case management of adolescents who have sexual problems or offending behaviors (SPOB) are recognized as both complex and different from services provided to adults. This can be particularly challenging when these adolescents also have intellectual disabilities (ID). Sexual problems or offending behaviors are defined in this context as sexual behaviors that are offensive and/or harmful to others, that place the adolescent at odds with society's rules, and that may lead to legal sanctions. The prevalence of adolescents with intellectual disabilities who have SPOB varies from study to study, but the general view is that adolescents with intellectual disabilities are overrepresented in the juvenile justice system. As a result, practitioners providing assessment, treatment, and case management services to adolescents who have SPOB are likely to encounter adolescents with ID.

Adolescents with intellectual disabilities who also have SPOB are an important subpopulation of offenders requiring specialized attention. Where possible, each section of this paper reviews the literature and covers relevant elements that point to treatment and case management adaptations needed to accommodate the individual's cognitive abilities. Similarly, each section discusses limitations within the research literature and in the use of contemporary tools and approaches designed for mainstream adolescents who have offended sexually. The paper is divided into the following sections:

- The Role of Intellectual Disability in Juvenile Criminal Behavior
- Sexual Development in Adolescents with ID
- Sexual Problems or Offending Behaviors by Adolescents with ID
- Effects of Developmental Disabilities on Parents
- Collaboration Between Parents and Involved Systems of Care
- Overarching Approaches to Intervention with Adolescents with ID
- Assessment of Adolescents with ID
- The Neurodevelopmental Impact of Trauma: Implications for Assessing and Treating Adolescents with Intellectual Disabilities
- Treatment for Adolescents with ID
- Residential Treatment Considerations for Adolescents with ID

This information packet summarizes much of what is known, yet much more is *unknown*. Problems have been noted where assessment measures originally designed for adolescents who are not intellectually disabled are used with those who have ID. This paper provides suggestions regarding appropriate assessment strategies—including structured risk assessment instruments—and emphasizes the need to properly consider the intellectual disability status.

Adolescents with ID most often receive community support services through local disability service agencies; however, many professionals working with individuals who have ID do not possess knowledge or expertise related to SPOB. Appropriate supervision and case management require cooperation and collaboration between families, the justice system, and disability service agencies. As definitive standards of care cannot be prescribed, this document offers what is considered evidence-based and promising practices.

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ASSESSMENT AND TREATMENT OF ADOLESCENTS WITH INTELLECTUAL DISABILITIES WHO EXHIBIT SEXUAL PROBLEMS OR OFFENDING BEHAVIORS

Gerry D. Blasingame, Kevin Creeden, & Phil Rich

INTRODUCTION

Adolescents with intellectual disabilities (ID) who exhibit sexual problems or offending behaviors are a diverse group. Their cognitive and other neurodevelopmental challenges are represented by a broad spectrum of skills and abilities. They also exhibit a diverse range of sexual behaviors. ATSA recognizes that adolescent girls may also exhibit sexual problems or offending behaviors; however, given that there is a lack of knowledge regarding this population, this document is focused on adolescent males.

Intellectual disabilities are complex conditions that often manifest themselves early in a child's development and have lifelong effects. (see the Assessment section below for diagnostic criteria). These conditions are characterized by delays in achieving developmental milestones and impairments in social, emotional, cognitive, and behavioral functioning. While some symptoms may be evident shortly after birth, others may not be detected until the child enters school, where greater academic or social demands are experienced. Although the long-term effects of cognitive functioning are relatively well understood, the effects on psychosocial development, processing traumatic experiences, and sociosexual maturation are less so. These issues bring challenges to professionals working to collaborate with families and provide therapeutic services in outpatient or residential environments.

For the purpose of this document, adolescence is defined as individuals who have entered puberty, are typically aged 12 and older (Herman-Giddens, 2006), and have a diagnosis of ID. It is difficult to precisely define the upper age limit of the developmental period of adolescence for persons with ID as social maturation and cultural adaptation can vary significantly from person to person. In the United States, federal regulations for educational funding allow individuals with ID to continue in the educational system through age 21. This upper age limit clearly overlaps with early adulthood and reflects the developmental immaturity within the intellectual and other developmental disability populations. As with other adolescents, those with intellectual disabilities may experience other conditions, such as autism spectrum disorder, attention deficit hyperactivity disorder, depressive or anxiety disorders, or other genetic conditions (Fletcher, Loschen, Stavrakaki, & First, 2007). These co-occurring mental disorders often complicate the assessment and treatment process for these individuals.

The Role of Intellectual Disability in Juvenile Criminal Behavior

A number of meta-analytic reviews support the idea that intellectual disability is a minor but significant factor in offending, particularly for juvenile offending (Andrews & Bonta, 2010; Office of the Surgeon General, National Center for Injury Prevention and Control, National Institute of Mental Health, & Center for Mental Health Services, 2001). Quinn, Rutherford, Leone, Osher, and Poirer (2005) reported that during the 2000–2001 school year, 8.8% of all

students aged 6 to 21 in the United States were served under the broad definitions of the Individuals with Disabilities Education Act. In contrast, 33.4% of youth in juvenile corrections during the same period were identified and receiving special education services. Nearly 48% of those youth were identified with emotional disturbance, 39% with specific learning disabilities, and 9.7% with intellectual disability. On the whole, about 2% of the US population has a mild intellectual disability (American Psychiatric Association, 2000; Dykens, 2006), indicating that the reported 9.7% would appear to represent a significant overrepresentation of youth with intellectual disabilities in the juvenile justice system.

Several reports indicate that adolescents with ID have characteristics that may place them at greater risk for problematic behavior. Compared to neurotypically developing adolescents, those with ID have similar but more intense problems with goal setting, problem solving, situational perception, interacting with others, managing difficult situations, regulating feelings, and identifying and managing internal and external triggers (Asscher, van der Put, & Stams, 2012). Asscher et al also reported that adolescents with ID who are involved in the justice system consistently score higher than those without ID on aggressive and violent behaviors.

In addition to the factors that predispose typically developing adolescents to delinquency, those with ID are also reported to have higher levels of impulsivity, exploitability, and desire to fit in with peers who may coax them to engage in delinquent or problematic behaviors (Douma, Dekker, de Ruiter, Tick, & Koot, 2007). Additionally, social information processing skills and related social deficits, such as poor emotion recognition and interpretation of social cues, are associated with aggressive and submissive behavior when assertive behavior is called for (Jahoda, Pert, & Trower, 2006; van Nieuwenhuijzen & Vriens, 2012). Failure to recognize the emotions expressed by others and failure to accurately interpret the nuances of social communication are associated with aggressive responses due to hostile interpretations. Douma et al. (2007) reported that boys with ID were between one and two times more likely to exhibit problematic behaviors than their typically developing male peers. These findings indicate that the factors contributing to their delinquent behavior are similar to those of their typical peers. Despite those similarities, interventions to address any specific behavior problem for adolescents with intellectual disabilities will need to be multidimensional and have an earlier onset to more broadly address such delinquent tendencies.

Sexual Development in Adolescents With ID

The onset of puberty for boys is typically between age 12 and 14 (Herman-Giddens, 2006). Puberty signals the beginning of the transition from childhood to adulthood and brings more than changes in secondary sex characteristics. The physiological changes also have a significant effect on mental, social, and behavioral aspects of the adolescent's life. This is further complicated when the adolescent has an intellectual or other developmental disability. Adaptive functioning deficits impair an individual's ability to establish and maintain self-regulation, inhibitory controls, and general impulse control. These deficits can also contribute to significant social and sexual behavior problems.

Most adolescents with ID have typical and normal desires for intimate and sexual relationships. While they may lack various interpersonal skills, there is no deficit of desire for connection, acceptance, love, or affection (Blasingame, 2005). Many people with ID desire to have intimate

relationships, marry, and have families of their own. For some, however, their opportunities for age-typical exploration and experimentation in social and interpersonal relationships are limited due to family supervision constraints, out-of-home placements, or societal prohibitions.

A significant number of adolescents with ID who have sexual problems or offending behaviors have themselves been physically, sexually, and/or emotionally abused (Blasingame, 2005; Nankervis, Hudson, Smith, & Phillips, 2000). While many of the perpetrators of that abuse are fathers, a large number of children and adolescents with ID have been abused by peers in school and group home settings. Overall, children, adolescents, and adults with ID experience victimization at a much higher rate than the typical population (Blasingame, 2010; Horner-Johnson & Drum, 2006). As with other populations, sexual abuse experiences may interfere with healthy sexual development among adolescents with ID. Abuse can have long-lasting effects depending on the timing of the abuse and disclosure, response to the disclosure, coping skills of the victim, and type of intervention in response to the abuse. Some adolescents with ID are unable to process the experience, disclose the abuse to a parent or supportive adult, or cope effectively with the emotional and psychological effects of being abused. This sometimes leads to maladaptive behavioral responses, including sexual problems or offending behaviors.

Adolescents who have an autism spectrum disorder (ASD) may also experience ID. In these cases, a number of social communication difficulties are believed to contribute to their vulnerability of being abused (Blasingame, 2011; Sevlever, Roth, & Gillis, 2013). These include challenges with accurately interpreting other people's verbal and nonverbal social cues detecting emotions, and impaired social perspective taking. Children and adolescents with ASD who have been physically or sexually abused are reported to be at greater risk for sexual misconduct themselves, when compared to others without these traumatic experiences (Mandell, Walrath, Manteuffel, Sgro, & Pinto-Martin, 2005).

Sexual Problems or Offending Behaviors by Adolescents with ID

Serious sexual problems or offending behaviors do occur among adolescents who have ID. Lower Full Scale Intelligence Quotients (FSIQ) and, more specifically, low verbal IQs (VIQ), have been associated with greater sexual acting out (Blanchard et al., 1999; McCurry et al., 1998). Low VIQ scores represent less than optimal executive functioning and poorer self-regulatory capacities (Danielsson, Henry, Messer, & Rönnberg, 2012). How these specific deficits influence sexual decision making is not fully understood.

It is difficult to identify just how many adolescents with ID have committed or been the victim of sexual crimes (Fyson, Eadie, & Cooke, 2003), as juvenile justice records do not consistently include ID as an identifier in case documentation. Further complicating the effort to calculate prevalence data is the fact that many adolescents in such circumstances are not adjudicated, particularly when the victim is another person with a developmental disability (Fyson et al., 2003). Therefore, it is likely that arrest records do not reflect the true frequency at which these problematic behaviors occur.

Specific forms of sexual problems or offending behaviors in which adolescents with ID engage vary on a continuum of severity (Blasingame, 2005; McCurry et al., 1998). Research on adults with ID indicates that those men identified as sexual offenders (or with problematic sexual

behaviors) engaged in a wide range of behaviors, including (but not limited to) sexual touching of children, coerced or forced sexual contact with other age mates, inappropriate touching of peers or staff members, exposing one's genitals in public locations, public masturbation, voyeuristic behavior, calling phone sex numbers, urocoprophilic behaviors, bestiality, fetishism, and frottage (Blasingame, Abel, Jordan, & Weigel, 2011). Similar sexual behaviors have also been reported regarding adolescents who have ID (McCurry et al., 1998; Miccio-Fonseca & Rasmussen, 2013). It is these types of sexual problems or offending behaviors that may bring the adolescent with ID to the attention of disability service agencies, child protective service agencies, or the juvenile justice system.

Effects of Developmental Disabilities on Parents

Neurodevelopmental disorders such as intellectual disabilities impact the parents and siblings of the affected individual. Some parents of children with ID consider their child to be a burden and they do not enjoy living with their child (Maes, Broekman, Dosen, & Mauts, 2003). However, while these children may present specific challenges, a majority of parents of children who have ID experience reward and gratification as part of their parental caregiving efforts and role (Caples & Sweeney, 2011). The presence of significant behavioral and emotional disturbances is an added challenge for approximately 40% of parents who have children or adolescents with ID (Einfeld et al., 2006).

Parental skills, resources, and parent—child engagement are critical in preventing or appropriately responding to delinquent behaviors in youth with and without intellectual disabilities. Dishion, Ha, and Véronneau (2012) report that coercive discipline by parents and rejection by peers negatively contribute to a youth seeking out individuals who will be more accepting and, often times, simultaneously support disruptive or delinquent behaviors. Such negative peers provide little reinforcement for prosocial behavior or school performance but do provide reinforcement for talk and behaviors that support delinquent activity. Youth with intellectual or other developmental disabilities also face the risk of being shunned and having no peers with whom they can associate. In terms of healthy development, youth with intellectual disabilities have a heightened need for prosocial assets in their families, peers, schools, and neighborhoods (Blasingame, 2014a; Bowers et al., 2011; Jones, 2012). The dynamic interaction between the individual and his familial and social contexts can either support or undermine positive outcomes.

Parenting a child who has ID is often complicated by comorbid mental health problems. Between 14 and 39% of individuals with an intellectual disability experience a comorbid psychiatric disorder (Deb, Thomas, & Bright, 2001). The presence of family dysfunction and parental mental health issues further compound the effects of these conditions on the adolescent. The presence of a comorbid mental condition also leads to greater stress and increases the risk of out-of-home placement (Esbensen, 2011).

The presence of both ID and a mental disorder impacts the parents, siblings, and other care providers, who in turn impact the affected individual. These circular effects include increased stress, depression, and pessimism on the parents' part. This may be reflected by the parents facing more challenges themselves and having a higher level of difficulty coping with these challenges.

Parents themselves may also have issues that affect their ability to parent as well as their own well-being (White & Hastings, 2004), including heightened levels of parental stress, anxiety, depression, and other psychopathologies. Having positive coping strategies and supportive social outlets that are accepting of their child can improve the family's overall quality of life (Blacher, Neece, & Paczkowski, 2005).

Positive parental and familial adaptation to the affected youth's intellectual or other developmental disability is aided by the presence of active coping skills and through teaching and training at the family level (Jones & Passey, 2005). Empowering parents with pragmatic skills and strategies for managing their child's behavior can be achieved by direct intervention, as well as through participation in support groups. Parent training programs should focus on supporting the parents' implementation of Positive Behavioral Support strategies (discussed below) which enable parents to develop greater abilities to address their child's behavior (Blasingame, 2014a; Carr et al., 2002; Jones & Passey, 2005). These strategies help parents achieve a greater sense of internal control and improved coping skills (Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006). Many parents of youth with intellectual or other developmental disabilities report a range of needs, from a supportive, listening ear to formal counseling and skills training, that are often not addressed in community programs (Douma, Dekker, & Koot, 2006).

Collaboration Between Parents and Involved Systems of Care

Adolescents with ID and SPOB and their families are often engaged with multiple systems. These include developmental disability service agencies, schools, mental health services, probation, medical service providers, and social services agencies. Collaboration among stakeholders from the multiple systems supports both rehabilitation and public safety interests and is associated with more effective treatment outcomes (Lipsey, Howell, Kelley, Chapman, & Carver, 2010).

Better intervention outcomes are achieved when parents are involved in the process, particularly when the interventions promote positive, directive parent—child interactions and the avoidance of inadvertent reinforcement of negative behaviors (Blacher et al., 2005). Empowering parents can be achieved through interactive psychoeducational groups or classes designed to improve parental attitudes toward supporting a child with ID (Blacher et al., 2005). Through engagement, education, and empowerment, parents can become more effective in carrying out their roles (Blasingame, 2014a). Such collaboration increases the potential for positive outcomes in parenting, parental engagement and support of treatment, and the youth's participation and response to treatment efforts.

Overarching Approaches to Intervention with Adolescents with ID

Positive Psychology

Treatment approaches embracing the principles of *positive psychology* are as important, relevant, and applicable in work with individuals with ID as they are with all other clients. Positive psychology involves recognizing and building upon the strengths, assets, natural resiliencies, and possibilities of individuals rather than focusing on deficits or limitations

(Seligman, 2002). An important operating principle of positive psychology is that individuals are capable of and want to develop and lead positive, meaningful, and satisfying lives, therefore focusing assessment and treatment only on disorders, deficits, or vulnerabilities may lead to deficit-based treatment rather than to a treatment that is rehabilitative. It is important therefore to ensure that treatment for adolescents with ID includes a strong focus on desired and achievable "approach" goals, i.e., teaching and promoting desired behaviors, rather than focusing only on teaching individuals to avoid problematic behaviors, i.e., "avoidance" goals.

Models such as Positive Youth Development (PYD) are similarly strength-based and sensitive to wide-ranging issues of child and adolescent development, and PYD itself has been introduced to the juvenile justice system (Schwartz, 2007). The model holds that treatment and developmental models can be directed toward desired (approach) goals rather than simply the prevention of undesirable behaviors (avoidance goals), and the core "5 Cs" of the PYD model reflect many of the treatment goals found in contemporary models of treatment for sexually abusive youth at all cognitive levels: competence, confidence, connection, character, and caring (Roth & Brooks-Gunn, 2003a).

Although not an empirically validated model of treatment for use with sexually abusive youth with ID, PYD offers an example of contemporary treatment for behaviorally troubled adolescents. Like positive psychology, PYD seeks to build upon and strengthen assets already present within the individual and found within the individual's ecological environment. According to PYD, youths are not seen as broken and in need of repair but as resources to be developed (Lerner, Almerigi, Theokas, & Lerner, 2005). PYD programs not only seek to prevent continued unhealthy behaviors and interactions, but also to build abilities and competencies by exposing youth to supportive and empowering environments that provide multiple opportunities for growth and the development of social capacities (Roth & Brooks-Gunn, 2003b). Mutually supportive and beneficial interactions with others pave the way for youth to not only avoid difficulties, but also to contribute positively to self and others (Lerner et al., 2005). Although literature has yet to be published on the efficacy of this approach specifically with youth with intellectual disabilities, PYD approaches focus on developing positive, prosocial capacities by using the resources available within the adolescent's home and community (Blasingame, 2014a).

Similarly, in developing treatment programs for juveniles with behavioral difficulties, and particularly group programs or models of congregate care such as residential treatment, it is important to focus on the development of a prosocial peer culture. The *positive peer culture* model, for instance, emphasizes the potential benefits of mutual peer support and help. Although the positive peer culture model is not adequate by itself to address the range of needs faced by ID clients (for instance, see Ryan, 2006), it is designed to develop social competence and increase self-worth, responsibility, and prosocial and caring connections with others (Laursen, 2010). Promoting positive peer relationships is but one aspect of the positive psychology approaches.

Risk, Need, and Responsivity Principles

Many overarching evidence-based strategies that apply to nondisabled adolescents involved with the justice system apply similarly to adolescents with ID. The principles of risk, need, and

responsivity (RNR), as well as the use of evidence-based treatment and fidelity to the RNR model, are well supported in the youth justice literature (Andrews & Bonta, 2010; Hoge & Andrews, 2011; Land, Ralph, Rasmussen, Miccio-Fonseca, & Blasingame, 2013; Latessa, 2006). Simply stated, these principles can help guide the overall assessment and intervention planning process. When adhered to faithfully, following the RNR principles helps facilitate a reduction in delinquency and crime, including sexual crimes (Hanson, Bourgon, Helmus, & Hodgson, 2009; Hoge & Andrews, 2011).

The risk principle instructs us to apply supervision and intervention strategies based on an individual's assessed level of risk for reoffense (Andrews & Bonta, 2010; Hoge & Andrews, 2011). The need principle instructs us to focus our interventions on factors that contribute to an individual's antisocial and/or criminal behavior, and that are considered to be changeable (Andrews & Bonta, 2010), as well as on individual and ecological protective factors, or those strengths that serve to buffer against risk. The responsivity principle instructs us to adapt and match our interventions to the learning needs and style of each individual (Andrews & Bonta, 2010; Hoge & Andrews, 2011).

With RNR in mind, assessment, treatment, and case planning recommendations should be based on the assessed risk for continued SPOB and other nonsexual behavior problems; identifying the primary treatment needs of the adolescent, including developmental and social needs; and recognizing and identifying the adolescent's likely responsiveness to treatment and any special issues that should be taken into account to ensure treatment services are best matched to the youth.

Positive Behavioral Supports

Historically, people with developmental disabilities were often subjected to disrespectful, humiliating, and sometimes painful or abusive conditions in the name of "effective treatment" (Blasingame, 2010; Dykens, 2006). There is, however, a growing body of research demonstrating that problematic behaviors can be improved with positive, nonaversive behavioral interventions and supports (Reid, Parsons, Rotholz, Braswell, & Morris, 2004). In response to those aversive and harsh interventions of the past, Positive Behavioral Support (PBS) was developed.

PBS is a set of evidence-based strategies used to increase quality of life and decrease problem behavior by teaching new skills to replace problem behaviors and by making changes in a person's environment (Association for Positive Behavior Support, 2008). PBS is not a specific practice or curriculum; rather, it is a general approach to preventing or changing problem behaviors.

The PBS schema assumes that:

- behavior is learned
- problem behavior is linked to and reinforced by environmental factors
- behavior change occurs through manipulation of environmental factors and through direct intervention with the focus person.

PBS involves interventions and supports that are multidimensional and include:

- implementing antecedent and setting event prevention strategies (e.g., preventing precursors that create the environment in which the acting out occurs)
- teaching replacement skills (e.g., teaching prosocial ways to get one's needs met)
- using nonaversive consequence or response strategies
- using positive reinforcement and extinction (Moskowitz, Carr, & Durand, 2011).

PBS emphasizes intervention strategies that:

- fit the individual and the context where they are implemented
- prioritize the individual's needs, goals, and values
- consider the goals, values, skills, and resources of the family or other caregivers (Blasingame, 2014a; Carr et al., 2002; Moskowitz, Carr, & Durand, 2011).

In PBS, the term "support" refers to the use of procedures and strategies that enhance personal competencies (such as developing social and self-calming skills) and making systemic changes that help create healthier environments in which those competencies can be used to promote a good quality of life (Carr & Horner, 2007; Gagnon & Richards, 2008). Interventions must not only facilitate behavior change, but also sustain those changes by ensuring that support efforts continue once professional interventions are withdrawn. For youth with intellectual disabilities, the system changes usually need to occur in family, peer, and school contexts (Gagnon & Richards, 2008). It is critical to empower parents and families in their efforts to support behavior change and maintenance.

Assessment of Adolescents with ID

Comprehensive assessment of adolescents with ID involves addressing a range of issues. Multidimensional assessments attempt to capture all the various types of information needed in the development of a case plan for therapeutic intervention and supervision (Blasingame, 2005, 2014b; Mussack, 2006a). As such, the assessment process needs to gather the following types of information, about both risk and factors that protect against risk:

- Current cognitive and adaptive functioning
- Individual strengths and assets, including support systems
- Developmental and familial history
- Family strengths and assets
- Mental health history and current diagnosis
- Sexual history, including sexual problems or offending behaviors
- Static and dynamic characteristics associated with risk for reoffense
- Environmental characteristics associated with risk for reoffense
- Protective factors that may serve to reduce the effects of risk factors including access to health care and social support services.

There are many psychometric and non-psychometric tests and inventories available to assess level of psychosocial functioning, adaptive skills, and general knowledge and awareness in individuals with ID. Each can be helpful in completing multidimensional evaluations. The following explores a range of topics associated with the assessment of adolescents with ID who have sexual problems or offending behaviors.

Diagnostic Criteria

Persons with ID have been variously described in the literature as individuals with mental retardation, learning disabilities, developmental delay, and intellectual disabilities. In the present document, we utilize the DSM-5 (American Psychiatric Association [APA], 2013) terminology, which discontinued use of the term "mental retardation" and adopted the internationally accepted term "intellectual disability." The DSM-5 notes this as the "equivalent term for the ICD-10 diagnosis of 'intellectual developmental disorders.'" A person may be diagnosed with an intellectual disability using DSM-5 if that person meets three diagnostic criteria (APA, 2013, pp. 33–41):

- 1. Criterion A: The person has "deficits in intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing" (p. 33). DSM-5 explains in detail how this criterion may be comprehensively assessed using IQ tests (p. 37).
- 2. Criterion B: The person has "deficits in adaptive functioning that result in failure to meet developmental socio-cultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community" (pp. 33, 37–38).
- 3. Criterion C; The person experiences the "onset of intellectual and adaptive deficits during the developmental period" (p. 33).

Historically, the diagnostic manuals differentiated the degree of intellectual disability based on Full Scale Intelligence Quotient (FSIQ) ranges. In DSM-5, the coding level of severity of intellectual disability is "defined on the basis of adaptive functioning and not IQ scores" because it is adaptive functioning that determines the "level of supports" that the individual will require (APA, 2013, p. 33). DSM-5 provides a three-page table describing at length how someone in the mild, moderate, severe, and profound levels of intellectual disability would differ in the conceptual, social, and practical domains, with clear examples for children, adolescents, and adults within each domain and across levels (APA, 2013, pp. 34–36). This section of the DSM-5 is helpful for differentiating the levels of intellectual disability using the new nomenclature.

Special Considerations in the Assessment of Adolescents with ID

As cognitive and adaptive skills functioning have a significant effect on how interventions can be modified for the individual, it is imperative that assessors take these into consideration. Assessment of cognitive functioning is customarily done using a standardized instrument such

as the Wechsler Intelligence Scale for Children–4th edition (Wechsler, 2003) or the Wechsler Adult Intelligence Scale–4th edition (Wechsler, 2008). Adaptive skills are commonly assessed using the Vineland Adaptive Behavior Scales–2nd edition (Sparrow, Cicchetti, & Balla, 2005) or the Adaptive Behavior Assessment System–2nd edition (Harrison & Oakland, 2003).

Most adolescents with ID who are referred for assessment of their sexual behavior have previously been diagnosed; these records can be accessed from their school or the developmental disabilities service agency. Reviewing the index and individual scale scores from IQ testing can be much more informative than only considering the FSIQ score (Blasingame, 2014a). Discrepancies between subscale scores can invalidate the FSIQ. As low verbal IQ scores have been associated with greater sexual acting out (Blanchard et al., 1999; McCurry et al., 1998), it is particularly important to take these into consideration. Both direct and indirect engagement should be made with sensitivity to the individual's vocabulary and language skills, communication skills, and social comprehension. It is critical that the environment in which information is gathered about the adolescent with ID, and the manner in which it is gathered, is sensitive to the nuances of intellectual disabilities and deficits in adaptive behavior skills.

In many ways, a comprehensive assessment of sexual risk for adolescents with ID is no different than a comprehensive assessment for any other youth with a history of sexually harmful or problematic behavior. It should include a thorough review of developmental, social, behavioral, family, and educational history and psychosocial functioning, and gather information from multiple sources and through multiple methods whenever possible, and should certainly rely on far more than the use of a sexual risk assessment instrument alone (American Academy of Child and Adolescent Psychiatry, 1999; Blasingame, 2005; Colorado Department of Public Safety, 2002; Rich, 2011; Righthand & Welch, 2001). However, in the case of adolescents with ID, the process of assessment should be sensitive to and take into account factors in the individual's psychosocial environment, as well as intellectual and psychological functioning that are especially pertinent to those with ID.

The literature specifically addressing assessment and treatment of adolescents with ID remains underdeveloped at this time (Miccio-Fonseca & Rasmussen, 2009, 2013; O'Callaghan, 2004), and most existing research is based upon adolescent males with average intelligence. Thus, to some degree, we must turn to the wider literature on intellectual disabilities in general and the better-developed (but still sparse) literature on the assessment of intellectually disabled adult nonsexual and sexual offenders. Such assessments should take into special consideration the ability of the individual to recognize and accept responsibility for poor behaviors and factors that may destabilize the individual, such as impulse control and self-regulation difficulties, as well as significant mental health issues and substance use, capacity to engage safely and appropriately in community settings, ability to make discriminating decisions, and persistent beliefs about sexual behavior (Blasingame, 2005; Lindsay, 2004; Mikkelsen, 2004), each of which are factors relevant to adolescents with ID.

A focus on social and interpersonal skills is also of special relevance in assessing adolescents with ID (Beail, 2004). Lindsay and Taylor (2009) stress the importance of being sensitive to and understanding the general cultural context for individuals with ID. This points to a special focus in the assessment of adolescents with ID: the need for the evaluator to recognize and

understand differences that may exist between the social and environmental world and circumstances of non-intellectually disabled individuals and those with ID, and how those with ID experience their world and other people in it.

Assessment of Risk for Sexual Reoffense

Risk assessment is the process of estimating an individual's potential for continued sexual problems or offending behaviors (SPOB). Despite advances in the field of sex offender treatment and management in recent decades, the processes for assessing and estimating risk for sexual recidivism of adolescents who have engaged in SPOB remains complex. Even when using the best methods available, the element of clinical judgment remains central to the process. Training and experience in assessment is therefore required, including understanding the unique individuals being assessed and the special features that may be relevant to each individual. This is especially true in conducting risk assessments with adolescents with ID who have engaged in SPOB.

In order to be most useful, a risk assessment will point to the unique factors or circumstances that may increase or decrease the possibility of further SPOB. Accordingly, it may be more helpful to conceptualize the assessment of risk as a way of identifying the preponderance of factors that continue to represent risk for that individual. Risk factors frequently point to underlying criminogenic needs, which may then be addressed in treatment and case planning. Contemporary risk assessment also evaluates the presence and influence of factors that protect against risk and decrease the potential for harmful behavior. These include stable and supportive relationships, prosocial beliefs, moral reasoning, supportive and stable environments, and supervision and monitoring. Treatment aims at decreasing the presence and influence of risk factors while also identifying strengths in each youth and his or her family and environment, and building upon and developing new skills, with the goal of building strengths rather than simply treating problems. From this perspective, risk classification represents the number and type of factors most pertinent to that individual, and areas of risk or protection that may be a focus for treatment, management, or supervision.

Assessing Risk in the Environment

Assessments of adolescent behavior should focus on both individual risk factors and risk factors that reside and operate in the individual's social and physical environment, and risk must be understood, at least in part, as contextual (Casey, Beadnell, & Lindhorst, 2009; Fanniff & Letourneau, 2012; Graham, Richardson, & Bhate, 1997; Rich, 2009, 2011).

Because adolescents with ID who have histories of SPOB are at risk to be placed in supervised care, such as group home facilities, these placements can expose them to other individuals who may well have challenging behaviors or other destabilizing effects. As exposure to antisocial peers or companions can increase risk, residential placement may in and of itself be iatrogenic (Blasingame, 2014b). This lends further support to the importance of considering environmental factors when completing risk and needs assessments with adolescents with ID.

Most of the instruments available for juvenile sexual risk assessment include a strong focus on environmental conditions and the adolescent's relationships in his or her environment. Indeed, assessing environmental conditions, as well as interactions and relationships with family

members, peers, and caregivers, for instance, may be particularly important in the assessment of individuals with ID, as these individuals may be especially sensitive to environmental stimuli (Hurley, Levitas, Lecavalier, & Pary, 2007). In this respect, risk for continued SPOB should be considered in the context of environments that provide low supervision, opportunities or inducements for behavioral acting out, access to potential victims, or significant emotional demands or stressors.

Use of Structured Risk Assessment Instruments

It is widely recognized that risk assessments should be structured and anchored in the findings of empirical research. It is also recognized that structured and empirically guided risk assessments are more reliable and valid than risk assessment processes that are unstructured, and thus are strongly preferred. The use of an evidence-based risk assessment instrument, defined by its inclusion of risk factors identified by research as relevant to risk for a sexual reoffense, is considered best practice.

However, the capacity of current risk assessment instruments to accurately predict sexual recidivism among adolescents has not been established (Caldwell, Ziemke, & Vitacco, 2008; Fanniff & Letourneau, 2012; Knight, Ronis, & Zakireh, 2009; Viljoen, Elkovitch, Scalora, & Ullman, 2009; Viljoen, Mordell, & Beneteau, 2012; Vitacco, Viljoen, & Petrila, 2009). Further, when used alone, no instrument is sufficient to fully complete the task of risk assessment (Bonta, 2002; Conroy & Murrie, 2007). Given the relatively low rates of sexual recidivism in adolescents who have completed treatment (Reitzel & Carbonell, 2006; Fanniff & Letourneau, 2012), using risk instruments as tools to help identify the presence and quantity of risk, need, and protective factors in the life of each individual, as well as in their environment—in order to shape and guide treatment—may be of greater value than their strict use as predictors of future behavior (Bengis, Prescott, & Tabachnick, 2012). Additionally, an empirically-based risk assessment instrument may not always be available or appropriate. Risk assessment instruments for adolescents with intellectual or other developmental disabilities that are informed by a research literature focused on risk and protective factors specifically for adolescents with ID have yet to be developed. Consequently, the use of risk assessment instruments designed for adolescents with average or higher intellectual functioning must be considered carefully. It is not uncommon for these instruments to be individualized or adapted for use with adolescents with ID, despite the lack of research.

Several risk assessment instruments are commonly used with normally developing adolescents who have offended sexually; however, evaluators should be aware of the strengths, limitations, and weaknesses of any risk assessment instrument selected:

- Juvenile Sex Offender Assessment Protocol-II. The J-SOAP-II (Prentky, Harris, Frizzell, & Righthand, 2000) was the first empirically anchored risk assessment tool for adolescents and is in common use. The instrument is clinical in design, and so does not yield statistically derived cut-scores or estimates of risk. While not designed specifically for use with adolescents with ID, it may be helpful in identifying targets suitable for treatment.
- Estimate of Risk of Adolescent Sexual Offense Recidivism. The ERASOR (Worling & Curwen, 2001) is another empirically anchored tool in common use. Like the J-SOAP-II, the instrument is clinical in design and does not yield statistically derived estimates of risk.

While not designed specifically for use with adolescents with ID, as with the J-SOAP-II, the ERASOR may be helpful in identifying treatment targets.

- Juvenile Risk Assessment Tool. The J-RAT (Rich, 2009) is an empirically based clinical risk instrument designed for the assessment of male adolescents, and has a companion instrument designed for interim reassessment, the J-RAT/IR. As previously noted, the CI/J-RAT is an offshoot of the J-RAT designed for the assessment of youth with intellectual disabilities; it, too, has an companion tool for periodic reassessment.
- Juvenile Sexual Offender Recidivism Risk Assessment Tool-II. The JSORRAT-II (Epperson, Ralston, Fowers, DeWitt, & Gore, 2006) is an actuarial risk assessment tool, meaning that estimates of risk for reoffense are derived from statistical cut-scores; however, it is currently validated for use in only four US states and its development sample did not include a significant number of adolescents with ID. Because it was not designed specifically for use with adolescents with ID, evaluators considering its use should do so with caution and certainly not as a stand-alone instrument, and they should recognize its focus on historical behavior and experiences rather than intellectual processes.
- Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually
 Abusive Adolescents and Children. A relatively new assessment instrument, the MEGA
 (Miccio-Fonseca, 2009, 2010) is standardized and has normative cut-off scores based on age
 and gender, making it applicable to a broad range of juveniles, including those with low
 intellectual functioning (Miccio-Fonseca & Rasmussen, 2013). The MEGA is relatively new to
 the field, its capacity to accurately assess risk for sexual recidivism among intellectually
 disabled adolescents is yet to be fully explored.
- Assessment of Risk and Manageability for Intellectually Disabled Individuals who Offend Sexually (Boer, Tough, & Haaven, 2004). The ARMIDILO-S is an adult risk assessment
 instrument specifically designed to systematically review multiple domains associated with
 risk for sexual reoffense for adults in care facilities. These domains include issues associated
 with care providers, residential and treatment environments, staff competencies and
 attitudes, the degree of monitoring provided by staff members, and stability or instability
 within the environment. Since the ARMIDILO-S is an instrument designed for the
 assessment of adults, caution must be observed in any use of the instrument for the
 assessment of adolescents.

Assessing Sexual Attitudes and Interests

Given the sexual problems or offending behaviors that instigated the referral for evaluation, the assessment of sexual awareness, knowledge, and interests is of great relevance. A number of studies have shown that persons with ID have low levels of knowledge about sexuality (see Lunsky, Frijters, Griffiths, Watson, & Williston, 2007) and experience greater problems negotiating consent for sexual interactions than persons without ID (although these issues can improve with appropriate interventions; for instance, see Dukes & McGuire, 2009).

Counterfeit deviance (Hingsburger, Griffiths, & Quinsey, 1991) is one of a number of hypotheses that attempt to explain the demonstration of problematic sexual behaviors in persons with ID. The central hypothesis is that sexual behavior in some persons with ID may seem to be driven by deviant interests (which may also be unlawful) or arousal, but when all the circumstances

are considered, the reason for the behavior is less deviant. Although several studies have questioned the validity of the counterfeit deviance hypothesis (Lunsky et al., 2007; Michie, Lindsay, Martin, & Grieve, 2006; Talbot & Langdon, 2006), it does bring attention to two important points. First, persons with ID may lack an awareness of the extent to which their acts are socially unacceptable (Lindsay & Taylor, 2009) and, second, it is important to address environmental factors, especially regarding the degree to which they may increase risk for sexual offending (Blasingame, Boer, Guidry, Haaven, & Wilson, 2014).

A number of instruments are available to assess sexual attitudes, knowledge, and interests:

- Self-report measures such as sexual history forms and questionnaires are commonly used to gather information about the onset of sexual awareness, types of sexual behaviors in which the individual may have been involved, sexual orientation, and general sexual knowledge. While not validated, self-report is the oldest form of information gathering, and is commonly used with adolescents with ID.
- The LifeFacts Sexuality Education (Stanfield, 1992) sexual knowledge screening estimates the individual's basic factual knowledge about human anatomy and functions, feminine hygiene and menstruation, human reproductive process, various birth control issues, sexually transmitted diseases, and the interpersonal and social aspects of sexuality and sexual relationships. The Stanfield materials also include a structured curriculum designed for the developmentally disabled population. The LifeFacts screening is clinically oriented, with the evaluator making a clinical judgment as to whether the individual has a sufficient knowledge base or whether training is needed. This tool can be used with adolescents with ID.
- The Socio-Sexual Knowledge and Attitudes Assessment Tool—Revised (SSKAAT-R; Griffiths & Lunsky, 2003; Lunsky et al., 2007) is normed for individuals aged 15 and older and is designed specifically for individuals with ID. Basic sexual knowledge and attitudes are measured. Domains include anatomy, sexual functioning, relationship issues of dating and marriage, pregnancy, and sexually transmitted diseases.
- The General Sexual Knowledge Questionnaire (GSKQ; Talbot & Langdon, 2006) is similar to the SSKAAT-R, although designed for adults. The GSKQ may also be useful for older adolescents with ID.
- Combining unobtrusively measured *visual reaction time* (VRT) with a self-report questionnaire is a method for assessing sexual history, fantasies, and interests. This approach has been shown to be useful in both adolescent and adult male sexual offenders. The *Abel-Blasingame Assessment System for Individuals with Intellectual Disabilities* (ABID; Blasingame et al., 2011) is one such measure, and was specifically designed for individuals with FSIQs from approximately 60 to the borderline intellectual functioning range. Preliminary data regarding use of the ABID with adolescents is similar to findings involving adults with ID (Blasingame, personal communication, September 31, 2015). While the value of VRT used alone in assessing sexual interests has not been fully established, and its capacity to be any more accurate than self-report has been questioned (Worling, 2006), the combination of VRT with questionnaire features in instruments such as the ABID may prove to be a useful tool in the assessment of sexual behaviors, interests, and fantasies.

Time Limitations on Juvenile Assessment

Contemporary research recommends that adolescent sexual risk assessments be considered effective for only short time periods, although an exact period is not specified (Caldwell & Dickinson, 2009; Fanniff & Letourneau, 2012). Estimates of risk for adolescents are likely to become less accurate over longer periods of time, in part due to developmental changes occurring during adolescence, as well as changing life circumstances that are typical for many adolescents (Worling, Bookalam, & Litteljohn, 2012). Again, this recommendation can be equally applied to assessments of adolescents with ID.

The Neurodevelopmental Impact of Trauma: Implications for Assessing and Treating Adolescents with Intellectual Disabilities

Over the last 20 years, there have been significant technological advances that have enhanced our capacity to actively examine the development and function of the human brain. Our increased understanding of neurodevelopmental processes throughout childhood and adolescence has promoted new perspectives in parenting and educating children, and provides greater insight into the cognitive and emotional dynamics that underlie behavioral decision making. This heightened interest and engagement in neurodevelopmental research has also facilitated progress in understanding the connection between the exposure to trauma in childhood and adolescence and subsequent emotional, behavioral, and cognitive difficulties exhibited by some children (Bremner, 2002; De Bellis, 2001; Perry, 2001; Teicher, Andersen, Polcari, Andersen, & Navalta, 2002. A number of studies have identified the immediate and long-term effects that a variety of adverse and traumatic experiences can have on child development (Bremner & Vermetten, 2001; De Bellis, Hooper, Spratt, & Wooley, 2009; Kairys, Johnson, & Committee on Child Abuse and Neglect, 2002; Middlebrooks & Audage, 2008; Perry, 2001; Teicher et al., 2002).

As noted earlier, a significant number of adolescents with ID with or without sexual problems or offending behaviors have themselves been physically, sexually, and/or emotionally abused (Blasingame, 2005; Nankervis et al., 2000). We also know that youth with ID who have SPOB are at greater risk for themselves experiencing sexual abuse and other types of maltreatment than nondisabled youth (Blasingame, 2010; Horner-Johnson & Drum, 2006; National Child Traumatic Stress Network, 2004). Since many adolescents entering treatment for SPOB present with their own histories of adverse experiences, understanding the neurodevelopmental impact of these traumatic experiences can inform our treatment interventions and judicial responses and enhance our understanding of the etiology of SPOB. While this applies to all youth who engage in sexually problematic behavior, it may be especially pertinent for assessing and treating adolescents with intellectual or other developmental disabilities.

The National Child Traumatic Stress Network (2003) identified the seven most frequent types of developmental insults that lead to post-traumatic behavioral difficulties in children. These are emotional abuse (59%), losses of important relationships (56%), impaired caregivers (47%), exposure to domestic violence (46%), sexual abuse (41%), neglect (34%), and physical abuse (28%). De Bellis and colleagues (2009) found that these types of experiences can also lead to a range of learning disabilities, including lower IQ and specific problems in reading, mathematics, complex visual attention, visual memory, language, verbal memory and learning, and effective

planning and problem solving. There is a clear overlap between these problems and several of the characteristics that are inherent in having an intellectual disability.

In conjunction with specific learning problems, broad developmental issues are associated with a child's experience of persistent stressors. These include attachment difficulties, significant deficits in self-regulatory functioning and inhibitory control, sensory integration problems, poor peer relationships, mental health problems, and involvement in the juvenile justice system (Aguilar, Sroufe, Egeland, & Carlson, 2000; Pollak & Kistler, 2002; Raine, Mellingen, Liu, Venables, & Mednick, 2003; Scheeringa, 2011).

Through their ongoing study of Adverse Childhood Experiences (ACE), the Centers for Disease Control and Prevention has shown that beyond the impact that a single, specific, adverse childhood experience may have on development, there is a broader, cumulative harm that can result from repeated or pervasive exposure to these experiences (Middlebrooks & Audage, 2008). Along with a range of health-related problems and the developmental and learning issues already noted, the ACE study has identified an increased risk for specific behaviors that are related to child and adolescent sexual behavior problems. These include the early initiation of sexual behavior, having multiple sexual partners, and the risk for intimate partner violence. These problems were shown to increase incrementally with the addition of each identified adverse childhood experience (Centers for Disease Control and Protection, 2013).

Implications for Assessment

Perhaps the most immediate issue for attention when addressing problems associated with the experience of trauma is identifying the type and severity of problems or developmental challenges associated with the trauma, as distinct from the characteristics of the intellectual disability itself. An exclusive focus on behavioral issues may obscure or minimize the importance of identifying a cognitive disability or appreciating how that disability may contribute to serious behavioral problems.

As already noted, research on the neurodevelopmental impact of trauma has identified a range of learning issues associated with early adverse experiences. Prominent in a number of studies has been the identification of problems associated with language-based learning, including reading difficulties, receptive and expressive language processing problems, and verbal memory challenges (De Bellis et al., 2009; Teicher et al., 2002). This creates assessment difficulties on a variety of levels, not the least being that receptive and expressive language difficulties and auditory processing problems— in addition to the preexisting effects of having an ID—may make it difficult to engage these adolescents in the assessment process. By the time they have reached adolescence, many of these youth have adapted in order to cover up language and communication difficulties by presenting as disengaged, unmotivated, distractible, or openly oppositional.

In addition to language-based learning problems, many studies have indicated that deficits in executive functioning skills often result from early, persistent stressors such as neglect and abuse (De Bellis, 2005; Nadeau, Nolin, & Chartrand, 2013; Perna & Kiefner, 2013; Schore, 2002). The term "executive functioning" refers to a wide range of skills including attention, concentration, anticipation, planning, abstract reasoning, concept formation, cognitive

flexibility, and the ability to control impulsive, unsuccessful, and inappropriate behavior. Difficulties in executive functioning have frequently been identified in studies focusing on delinquent and conduct-disordered behavior (Morgan & Lilienfield, 2000; Raine et al., 2003; Scheeringa, 2011), as well as being specifically identified in individuals engaging in problematic sexual behavior (Stone & Thompson, 2001). These compromises in executive functioning only further compound the effects of having an intellectual disability.

Implications for Treatment

Research on the neurodevelopmental impact of trauma for children and adolescents has several significant implications for how we approach treatment with adolescents with ID who engage in SPOB. In particular, there are key developmental concerns that need to be assessed when considering treatment interventions and strategies and that, to a great degree, frame what is often known as trauma-informed treatment:

- Trauma: Because of the high incidence of trauma experiences in adolescents with ID who have engaged in SPOB (Blasingame, 2005; Burton, Duty, & Leibowitz, 2011; Seto & Lalumière, 2010), a trauma-informed perspective in approaching treatment may be called for. This includes incorporating the findings from neurodevelopmental research involving arousal regulation, language deficits, and executive functioning. It also includes incorporating aspects of trauma-informed care, such as attachment theory, mindfulness, sensory integration, and adapted dialectical behavior therapy (DBT) approaches.
- Arousal Regulation: Several authors have noted that the core of traumatic stress involves the breakdown of the capacity to regulate internal states such as fear, anger, and sexual impulses (Schore, 2003; van der Kolk, 2005). Treatment of SPOB has historically focused on increasing an individual's capacity to modulate his or her sexual impulses. However, research on the problems associated with persistent childhood stressors has identified broad difficulties in regulating physiological, emotional, and behavioral responses due to increased activation of complex networks within the brain (Bales & Carter, 2009; Porges, 2011; Teicher et al., 2002). These findings suggest the need for body-based treatment interventions that focus on bottom-up, as well as top-down, capacities to self-regulate (Ogden, Goldstein, & Fisher, 2013).

Specifically, "bottom-up" interventions focus on helping the adolescent accurately attend to and identify physiological cues that accompany dysregulation, as well as actions that can help regulate their responses to anxiety, distress, and trauma triggers. Some interventions include the use of movement, sensory integration and modulation, breathing techniques, and other body-based interventions. Initially, it may be helpful to pair these new skills with simple biofeedback mechanisms like monitoring heart rate and coherence, and galvanic skin response (GSR). These biofeedback measures reinforce a sense of client control and effectiveness while encouraging the regular practice and use of these skills (Champagne, 2011; Hammond, 2003, 2005).

"Top down" refers to cognitive approaches and interventions typically used in most treatment programs for sexually problematic behavior. These include an understanding of triggers, recognition of high-risk activities or environments, an understanding of the negative consequences for oneself and others for engaging in certain behaviors, and the

development of plans that address identified issues and needs in a more adaptive, prosocial manner. Consistent with previously noted issues involving the learning styles and difficulties found in ID adolescents, even top-down processing and planning should be done in a multimodal manner. Top-down interventions with ID adolescents should utilize clear, direct language and visual organization and reminders, and provide the opportunity for practice and role-plays that allow the client to learn, organize, retain, and integrate new ways of coping and problem solving (Craig & Hutchinson, 2005; Lindsey & Smith, 1998; Rose, Jenkins, O'Conner, Jones, & Felce, 2002; Sakdalan & Gupta, 2012).

- Language Deficits: Most clinicians are trained to engage people in a therapy process that is heavily language-loaded. However, research has pointed to deficits in language processing and language-based learning in youth with histories of abuse and neglect, and in delinquent populations in general. This is further heightened for individuals with intellectual disabilities. Consequently, multimodal approaches to treatment that regularly utilize sensory-based, movement-based, and other types of experiential interventions are recommended. Jensen (2000, 2005) points out that children and adolescents are likely to be more engaged in the learning process, and better able to integrate information, when information is presented in a variety of modalities and attention is paid to the factors that influence neurological processing.
- Executive Functioning: As noted, research has identified significant executive functioning deficits in adolescents who have experienced trauma (Garrett et al., 2012; Lanius et al., 2003). Executive functioning difficulties have been associated with conduct disorders, behavioral impulsivity, and aggressive behavior (Brower & Price, 2001; Craig, Browne, Beech, & Stringer, 2004; White et al., 1994). Executive functioning skills impact self-regulation, effective problem solving, attention, and other areas that allow individuals to adapt and function every day. The educational field has increasingly focused on identifying executive functioning difficulties and enhancing executive functioning skills (Riccio & Gomes, 2013). Executive skill development should likewise be included in the assessment and treatment planning process for adolescents with ID.

Treatment for Adolescents with ID

Treatment developed for clients whose intellectual capacity ranges from low to above average is not likely to be as effective with cognitively lower-functioning individuals. To be most effective, as with any treatment established within the RNR schema (discussed above), treatment for individuals with ID should be tailored to their particular needs and level of cognitive capacities, and developed and presented in a manner sensitive to the unique learning needs of individuals with ID. However, treatment for those with ID should not merely be a simplified or modified version of other treatments. Instead, it should be an intervention designed for adolescents with cognitive issues, specifically associated with the individual's strengths and weaknesses.

Diminished intellectual capacity results in significant limitations on one's ability to form abstract ideas and formulate a set of related, highly developed, and age-typical formulations about the world and its operations. Intellectual capacity clearly affects the ability to process, understand, and work with complex ideas more typical and expected of adolescents and adults. Diminished

intellectual capacity reflects diminished capacity to develop higher orders of abstract thinking, perspective taking and empathy, and understanding of moral expectations and the internalization of a higher order of moral decision making skills. Neurological impairments further limit the development of these increased cognitive skills and capacities. As noted earlier, the sequelae of traumatic experiences may also inhibit progression toward development of adult-like empathy, moral reasoning, and the capacity to form intimate sexual and nonsexual relationships. This also means that the intellectually disabled individual may not recognize or understand the nature of emotional and cognitive experiences in others, and thus lack age-appropriate metacognition.

Determining the level and complexity of the material to be included in treatment is a necessary first step. Determining the level and depth of materials being used is an ongoing aspect of treatment as clinicians learn more about each client and as each client progresses through treatment over time. The format of treatment materials and the level of treatment content must be specifically designed for adolescents with ID.

Treatment aims to decrease the presence and influence of risk factors and to identify strengths in each youth and his or her family and environment. Building upon strengths and developing new prosocial skills, rather than simply treating problems, can contribute to the growth and change process.

Treatment Delivery, Content, and Material

The behavioral and relational issues addressed with youth with ID are largely the same as those for nondisabled adolescents; however, treatment for youth with ID may be more narrow and concrete in depth, content, and delivery, and it may focus more on and revolve around behavioral management and reinforcement. In addition, experience-based forms of treatment may be more helpful than verbally based forms.

Experience-based therapy addresses treatment and stimulates change in ways that rely more on performance skills than verbal and language-based processing and expressive skills. In many individuals with ID, performance skills are often better developed than verbal skills. Experiential methods typically involve multisensory learning, considered to be an important method in the education and treatment of individuals with ID (Baillon, van Diepen, & Prettyman, 2002; Houghton et al., 1998). This suggests that treatment and intervention methods should approach learning through at least three channels: auditory, visual, and tactile or kinesthetic. In addition to written and verbal work, art, drama, music, recreational, and other largely nonverbal therapies facilitate self-expression and discovery, and present a multisensory approach to treatment. However, as many individuals with an ID may have difficulty generalizing learned information to new or novel situations, described below, treatment strategies and interventions must also be developed that allow the application of new learning to a wide range of situations that individuals will face in their lives outside of the treatment environment.

Social skills training, important for all adolescents with SPOB, is especially important in the treatment of youths with ID (Blasingame, 2005, 2011) and should be included in their treatment programming. Occupational and physical therapy are frequently useful in work with individuals

with ID, with a focus on addressing, remediating, and developing a range of functional, social, and physical skills. These are necessary for improved social adaptation and improvements in self-management—common areas of concern for individuals who have SPOB. Other special education services are commonly needed as well, including speech and language interventions.

Treatment materials, including workbooks and homework assignments, must be tailored for work with individuals with ID to accommodate their specific cognitive strengths and weaknesses (Blasingame, 2014a). One aspect of this is to ensure that the youth can read and comprehend any written materials used. With respect to cognitive abilities in the mild intellectual disability range, materials should be at a reading comprehension level that is between the second and fourth grade level. Examples of these types of published materials include the workbook *Footprints: Steps to a Healthy Life* (Hansen & Kahn, 2012) and worksheets from *Developmentally Disabled–Sexual Offender Rehabilitative Treatment* (DD-SORT) (Blasingame, 2005).

A common feature in treatment for typically developing youth who have offended sexually is the dysfunctional behavioral cycle. The issues identified in one's "cycle" are often targeted with additional interventions. Changing one's cycle becomes an element of safe behavior and relapse prevention plans. However, not all adolescents who have offended actually have a "cycle." Additionally, as simple as a cycle model might appear, it can be a complex model and too abstract for youth with ID (Blasingame, 2005). Alternatives have been developed that are easier for developmentally disabled individuals to recognize and more intuitively understand. For instance, Blasingame (2005) uses a linear model referred to as the "Ladder to Trouble" rather than a cycle. Using seven rungs of a ladder to illustrate steps to problematic behavior, individuals with ID can learn in a stepwise fashion about issues that contributed to their SPOB and are taught alternative choices and behavior to avoid climbing "the Ladder." In Footprints, Hansen and Kahn (2012) use a board game format. Rich (2011) uses the "Safe Steps" model, which was also designed for work with individuals with ID, to replace the behavioral cycle with twin stairways, each with four steps progressively getting closer to either problematic or successful behavior, again providing a linear and less complex model to learn about safe or problematic behavior.

These more linear and direct models call for less abstract thinking. Additionally, they can be modeled in sessions using a real set of steps or a real ladder, by role-playing taking steps or climbing a ladder, or by drawing steps on a marker board. All these options create an opportunity for kinesthetic and multisensory learning. Even when content and materials are designed for clients with ID, depending on the different intellectual capacities and skill sets of different individuals, treatment must ensure the clients comprehend the language and words used, as well as the ideas behind what may seem to nondisabled individuals to be a simple model.

As mentioned previously, it is also important to recognize that some adolescents with ID may attempt to conceal their cognitive limitations and deficits, and may avoid situations where these become apparent. Acquiescence has been identified as a potential problem for assessment and treatment purposes (Blasingame, 2005; Blasingame et al., 2011; Finlay & Lyons 2002). Many will seem to acquire information but may actually not grasp the full meaning,

understand how to apply ideas to everyday life or risky situations, or retain information learned. In working with individuals with cognitive impairments, there is a risk that they may become effective at repeating, or parroting, information in a manner well enough to make it appear that they fully comprehend the material when that is not the case.

As noted, another aspect of intervention in work with adolescents with ID is the task of generalization, or the ability of the individual to apply learning about one situation to a different, novel situation. Because of this, in addition to a multisensory approach, treatment and treatment materials must ensure that concepts and behaviors are: (1) taught in a manner that best supports comprehension, (2) taught repetitively to help ensure retention, and (3) taught and applied across a variety of situations that best support generalization. Ideally, treatment interventions designed with generalization in mind will include a focus on the teaching and supervision of treatment activities and interventions under "real life" circumstances rather than only those provided in controlled treatment settings.

Treatment should focus primarily on *approach* goals (for instance, desired thoughts, behaviors, and relationships) and not only on *avoidance* goals (such as thoughts, behaviors, and situations to avoid). Approach goals are important in producing effective outcomes (Ward, Vess, Collie, & Gannon, 2006), and include goals desired by the individual, such as improved social skills, developing healthy relationships, school or work-related goals, etc. Promoting the acquisition of new skills while reinforcing and maintaining already-known skills has significant support in the literature (see Blasingame, 2011).

As mentioned, treatment should be multifaceted and address needs and goals relevant to the individual, including goals related to family, peer group, school, and the individual's community. Treatment should include a focus on mental health issues as well, ensuring that psychiatric needs are recognized, understood, and addressed. These domains for assessment and treatment are as important in a comprehensive approach to the treatment of clients with ID as with any other adolescent with SPOB.

In work with clients with ID, it is important to ensure opportunities for teaching and reinforcement of ideas and behaviors. For instance, visual cues can be posted that help clients be honest, think about others, consider personal boundaries, and stop and think before engaging in behavior (Blasingame, 2005; Hansen & Kahn, 2012). These can help remind clients about the ideas of treatment, social expectations, and how to avoid difficulties and problem behaviors. Examples of visual cues include an angel's halo as a reminder to think of others, a broken fence to represent damaged boundaries, a traffic stop sign as reminder to think first, or an exploding bottle as a reminder of bottled emotions.

Developing Appropriate Sexual Knowledge and Healthy Expression

Adolescents with intellectual and other developmental disabilities face a number of challenges in their sexual maturation process. The physical development for the majority of these youths follows the same pace as that of their typically developing peers, yet they lag behind in terms of the psychological and social aspects of sexuality (Blasingame, 2005, 2011; Mussack, 2006b). There are times when their behavior is more consistent with their mental age rather than their chronological age (Mussack, 2006b). There are also times when their behavior may result from

non-deviant motivation, referred to as counterfeit deviance or pseudo-deviant behavior, which nonetheless needs to be addressed (Blasingame, 2005; Hingsburger et. al., 1991; Mussack, 2006b). These nuances need to be differentiated during the assessment process (discussed above) to ensure that the behaviors are not over-pathologized in the course of assessment or intervention (Mussack, 2006b).

Concerns and issues typically important to address in the treatment of ID youth with SPOB include deepening their knowledge and understanding of age and socially appropriate sexual interests, relationships, and healthy sexual behavior (O'Callaghan, 2004). In the context of treatment and sex education that focuses on healthy sexual development, it is important to be aware of the adolescent's sexual knowledge base in order to identify an appropriate beginning point for intervention. A number of aspects of the individual's sexual knowledge base need to be ascertained and addressed in the course of treatment, including the following:

- The vocabulary used by the adolescent and his or her parents to describe sexual anatomy, behavior, and relationships
- The parents' sexual value system
- The adolescent's understanding of concepts such as private parts, private places, public places, and having permission
- The adolescent's ability to differentiate private sexual parts from the right to have all of one's body considered private and free from unwanted touch
- The extent of the adolescent's knowledge of general social rules and conventions related to private sexual behavior and romantic relationship skills that might lead to sexual behavior
- The extent and sources of the adolescent's sexual knowledge or information
- The adolescent's ability to distinguish appropriate and inappropriate sexual behavior or partners
- The adolescent's own history of sexual, physical, or emotional victimization
- The adolescent's history of exposure to pornography
- The adolescent's understanding of the potential consequences of engaging in inappropriate or abusive behavior, both for themselves and their victims
- The type of support offered to the adolescent by family members or care providers in developing sexual knowledge and expressing healthy sexual behavior
- The existence of opportunities for the adolescent to express his or her sexuality in a healthy manner (Blasingame, 2005; Mussack, 2006a).

Efforts to provide sexual education or intervention with adolescents with ID and other developmental disabilities should begin with gaining explicit, informed consent from the youth, as well as his or her parents or legal guardians (Blasingame, 2011; Mussack, 2006b). Bringing parents into a discussion of the content to be discussed, the level of sexual explicitness that may be involved, the types of props, materials, or media to be used, etc., can serve to engage, educate, and empower parents in their own roles (Blasingame, 2011). Although a number of sex education resources exist, it is important to recognize that a great deal of sex education is actually about relationship training (Schwier & Hingsburger, 2003).

To summarize, adolescents with ID are a heterogeneous group that has special considerations in regard to treatment. Regardless of similar IQ scores, each individual carries a different set of intellectual difficulties and strengths, a different set of functional skills and treatment needs, and a different personality and temperament. Recognizing these differences is a critical first step in providing treatment to clients with ID.

Treatment should be comprehensive—directed toward the acquisition of ideas, behaviors, and social skills that promote prosocial psychosocial functioning and relationships. However, treatment must be developed and delivered in the manner most appropriate to each individual client, including the developmental and intellectual level of each client, in order to provide the greatest opportunity for success. Whenever possible, this should include an emphasis on skill development, acquisition, and practice in real-life circumstances and not simply in a controlled treatment environment. Under all circumstances, clinicians must also be sensitive to the special needs of each individual client, and ensure that there is a match between intellectual capacity and the form of treatment activities.

Residential Treatment Considerations for Adolescents with ID

Research suggests that adolescents with ID who exhibit significant behavior problems may be more likely to come to the attention of Child Protective Services (CPS; Butchart, 2008). Those with behavioral issues also constitute a higher-than-expected portion of children placed in out-of-home care (Fuchs, Burnside, Marchenski, & Mundry, 2007). As discussed above, the presence of a comorbid mental condition also increases the risk of out-of-home placement (Esbensen, 2011).

A variety of related factors appear to contribute to these findings. Lower intellectual functioning may be more prominent in socioeconomically disadvantaged families, and these families may be more prone to come to the attention of CPS (Emerson & Hatton, 2007; Weiss, Waechter, & Werkerle, 2011). Children with ID may also prove to be significantly more stressful to parents, leaving them more vulnerable to a range of poor parenting responses (Brown & Fudge Schormans, 2003; Govindshenoy & Spencer, 2007). Youth with ID may also have reduced access to health-promoting activities, such as a high level of parent—child verbal interaction and cognitive stimulation in the home environment (Weiss, Waechter, & Werkerle, 2011). Since higher intellectual functioning is frequently found to be a prominent factor in enhancing resiliency in the face of adverse childhood experiences (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Weiss et al., 2011), adolescents with ID may exhibit a greater degree of behavioral and social difficulties while simultaneously having fewer consistent family and community-based resources available to them. These problems may be exacerbated for adolescents exhibiting mild or borderline ID, since their learning problems can be unrecognized or unattended to in the context of serious behavioral issues.

Variables in Residential Placement for Adolescents with ID

Beyond the problems typically experienced in treating adolescents with serious behavior problems, adolescents with ID come to residential treatment settings presenting with a variety of other possible complications.

Broad Discrepancies Between Chronological Age, Cognitive Functioning, and Social/Emotional Development

All treatment programs and individual treatment providers should consider the adolescents they are treating within a developmental context. It is important to appreciate that adolescence is a period of significant growth and change, and that there is a great deal of variability regarding the pace at which different adolescents will progress through these developmental changes. As discussed, we have also become increasingly aware that adverse childhood experiences and specific experiences of child maltreatment have significant neurodevelopmental impacts. These create serious obstacles to a more normative developmental trajectory for these adolescents. Balancing the capacities of the individual with the demands that are placed on him or her requires thoughtful consideration.

These variabilities can be accentuated in adolescents presenting with ID. When an adolescent is chronologically age 16 but has the adaptive social functioning of a 5- to 6-year-old and the cognitive skills of a child in the third grade, the treatment program has to continually make decisions about the level of functional and behavioral demands the adolescent is capable of meeting and the level of social and emotional challenges with which he or she should be presented. In addition, state and local educational systems have different regulations regarding the limits on chronological age groupings allowed in classrooms or living environments. This can result in being placed in a setting with peers who have much more divergent levels of social interests and higher levels of adaptive functioning. Under these circumstances, individualizing day-to-day residential services becomes more challenging. This may prove especially difficult when addressing psychoeducational and behavioral issues associated with normative adolescent sexual development in work with youths whose social, cognitive, and adaptive functioning skills are not congruent with their chronological age.

A Wide Range of Learning Disabilities

The heterogeneity of sexually abusive youth is "one of the most resilient findings in the research on juvenile sexual offenders" (Caldwell, 2002, p. 296). The same is true for adolescents with ID. They do not all present with the same learning challenges. These adolescents can present with pervasive and wide-ranging developmental disabilities or with very specific deficits, some of which may have previously gone unidentified (Kira, Somers, Lewandowski, & Chiodo, 2012; Langevin & Curnoe, 2007). These adolescents may have an autism spectrum disorder or attention deficit hyperactivity disorder, have clear language-based processing problems, have a nonverbal learning disability. On the other hand, although there may be deficits in executive functioning capacities that make academic performance and adaptive learning especially difficult, other specific skills may be intact, leading others to consider them more functional than they really are. The range of learning obstacles presented by adolescents with ID demands a higher degree of flexibility, resources, and staff training—in everything from providing instruction in daily living skills to developing appropriate educational curricula and deciding on effective treatment modalities—than most residential treatment services consider when their programs are developed.

The Role of the Treatment Program in Relation to the Juvenile Justice System

It is not only adolescents with ID who exhibit significant behavior problems or who have a comorbid mental condition who may be more likely to be placed in out-of-home care. Depending on the jurisdiction and the severity of the offenses, many adolescents who are charged with committing a sexual offense may be diverted to a residential treatment program in lieu of immediate prosecution, or may be committed by the courts to a residential treatment program rather than a more traditional juvenile detention center. A situation that may arise for adolescents with ID is that they are sometimes found to be not competent to stand trial for the identified offenses and are placed at a residential treatment program with open charges. One goal of the prosecuting attorney may be for the adolescent to make enough progress in treatment to be found competent to face trial, while the adolescent's defense attorney may advise their client to limit their participation lest they face broader criminal sanctions. In all situations, regular clarification and clear communication with the adolescent and his or her involved guardian regarding the adolescent's standing with the court and the parameters of the program in communicating with the court and other involved parties is recommended. As noted, however, clear communication and understanding can be more difficult when the client has notable impairments in language processing, memory, and abstract thinking.

Important Elements for Residential Treatment for Adolescents with ID

- 1. Given the need for adapted treatment curricula, broader educational resources, specialized staff training, and greater flexibility in developmental expectations and demands, it is recommended that adolescents with ID who exhibit sexual problems or offending behaviors only be placed in settings or programs that have been specifically designed and trained to provide services for individuals with ID. Being placed in more generalized residential treatment settings, even those developed to treat non-intellectually disabled adolescents with sexual behavior problems, increases their chances for treatment failure and can exacerbate their difficulties with learning, and thereby increases the likelihood for behavioral dysregulation. Being in a placement with more delinquent adolescents also makes them more vulnerable to manipulation, social humiliation, and victimization by more functional peers.
- 2. Given the learning and social difficulties they are likely to exhibit, an essential element of residential treatment for adolescents with ID is having a consistent and supportive daily structure and schedule. This will include clear and consistent guidelines regarding behavioral expectations and clearly defined consequences (both positive and negative) for engaging in different identified behaviors. While this is certainly considered a primary component of any residential treatment program, adolescents with ID—and especially those with a history of traumatic experiences—will likely exhibit greater difficulty effectively responding to behavioral expectations and limits when they are less clearly defined. They may also have difficulty adjusting to daily schedules that don't help them anticipate and plan for everyday environmental demands. While expanding the ability of adolescents to flexibly and adaptively respond to a range of environmental and social situations should ultimately be a central goal in all residential placements, this is particularly challenging for adolescents who present with limited capacities in self-

- regulation, accurately reading social cues, cognitive flexibility, verbal mediation, conflict resolution, and generalizing learning from past experiences.
- 3. Given the presence of a wide range of learning issues and the likelihood that most clients will exhibit deficits in language-based learning, multimodal and multisensory instruction and intervention will be an important element for all aspects of the residential program. Academic instruction, therapeutic interventions, and the teaching of daily living skills need to be accomplished through an integration of visual, experiential, kinesthetic, and verbal instruction. Frequent repetition of instruction with the opportunity to actively practice newly acquired skills will be required for clients to integrate new information and skills. All staff will benefit from supervision, support, coaching, and resources that can assist them in utilizing a multimodal/sensory approach in their work, rather than relying on traditional types of instruction for adolescents who may be more verbally oriented and demanding.
- 4. Treating adolescents with ID who have SPOB should also challenge providers to realistically examine what they consider acceptable or "normal" sexual behavior for individuals with ID. This includes an assessment of the opportunities that individual programs (and society in general) offer these adolescents to develop more normative peer social and sexual relationships. It also means that residential treatment settings need to establish clear instructions and guidelines for what types of sexual behavior and sexual expression will be allowed in their programs.
 - Too frequently, residential treatment programs for adolescents with SPOB provide a view of sexual behavior and sexual relationships that is too broadly or vaguely defined (e.g., healthy vs. unhealthy), or when defining for clients what is acceptable and unacceptable sexual behavior, the program does not realistically portray the prevailing, accepted sexual practices for adolescents and young adults in society. This lack of clear, realistic discussion and guidance is especially problematic for adolescents with ID who are likely to have more limited social exposure and sexual knowledge than their peers. These adolescents' view of "normal" sexual behavior is therefore more likely to be shaped by their own experiences of sexual victimization or by a reliance on pornography as a means for sexual education. Residential treatment programs for adolescents with ID will need to grapple with the issues of providing sex education and guidelines around acceptable sexual behavior in a manner consistent with the learning and developmental capacities of the individuals they treat. This often means addressing social skills, sexual behavior, and sexual relationships in a more direct, concrete, and specific manner than many residential treatment settings may be accustomed to providing.
- 5. Given the ID adolescent's prevailing needs for experiential learning, regular practice of learned skills, and difficulties in generalizing specific learning to broader situations, it is recommended that residential treatment settings incorporate a broad range of supervised community activities into their treatment programing. These activities should include opportunities to practice daily living skills (e.g., personal shopping, negotiating public transportation, etc.), engage in vocational training or work activities, attend athletic events and other community gatherings, and participate in individual and group community service activities. The type of community activity and the level of participation

will obviously depend on the capacities and developmental level of the individual. To ensure the safety of the community and the individual adolescent, programs would need staffing to provide a sufficient level of supervision, coaching, and structure that optimizes successful participation and learning. Perhaps even more than others, adolescents with ID need an opportunity to experience "positive failures." Not all community activities will go smoothly but, except for genuine concerns regarding public and personal safety, these adolescents need chances to learn from experiences that do not go well. As long as supervision and coaching are available, allowing adolescents to sometimes struggle in managing the social and environmental demands of a given community situation provides them and treatment providers a realistic assessment of their adaptive capacities, decision-making, and ongoing treatment needs. Participation in supervised community activities can also more accurately inform our assessment of treatment progress and current risk.

SUMMARY

Adolescents who have intellectual disabilities and have exhibited sexual behavior problems or offending behaviors are being referred to treatment specialists with greater frequency. It is well accepted that there is an overrepresentation of youth with ID within the juvenile justice system. There are also a number of adolescents with ID and SPOB who are not formally adjudicated, but are referred for services nonetheless. While there are a number of characteristics that youth with ID share with adolescents who do not have ID, there are likewise many characteristics that are quite different. This paper has described a number of evidence-based and highly promising practices that enable practitioners to provide the most effective services for adolescents with ID and their families.

There are several critical elements to consider. One is that those professionals who provide assessment, treatment, and case management services for these adolescents must be well informed of the available tools, their limitations in use with adolescents with ID and SPOB, and required adaptations or modifications to conventional treatment and case management models in order to most effectively deliver services. A second critical element involves the need for professionals working with adolescents with ID and SPOB to be well informed regarding the effects of cognitive impairments on the social and sexual development of adolescents and how these may impact the treatment process for each individual. Another critical element is that service providers must be cognizant of the effects on parents of having a child with an intellectual disability, the systems of care with which the family is likely involved, and the necessity of promoting a collaborative case management process in order to most effectively treat and manage each individual within his or her broader life context.

Also noted is the need not simply to adapt or modify existing treatment materials that were designed for non-ID adolescents, but to instead consider the special needs of adolescents with SPOB from the outset in designing and implementing treatment models, designs, and content. Similarly, attention must be paid to the special needs of adolescents with ID without depriving them of opportunities to engage in normalizing activities, and to do so in a manner that best suits individual learning weaknesses, strengths, and styles, and that includes significant opportunities for learning and practicing new skills.

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