Behavioral Health

ISSN: 2331-7582 (ONLINE)

Fetal Alcohol Spectrum Disorders and Offender Reentry: A Review for Criminal Justice and Mental Health Professionals

Jerrod Brown, Sarah Herrick, and Jeffrey Long-McGie

Contributors: Blake R. Harris, Kathleen Bischel Beddow, Judge Anthony (Tony) Wartnik, Tina Jay, Erv Weinkauf, Janina Wresh, & Jody Allen Crowe

Fetal Alcohol Spectrum Disorders (FASD) refers to a set of pervasive, life-long conditions that can contribute to a host of adverse outcomes (Brown, Connor, & Adler, 2012; Chudley, Conry, Cook, Loock, Rosales, & LeBlanc, 2005; Malbin, 2004; Streissguth & O'Malley, 2000). FASD is an umbrella term that encompasses a range of disorders such as Fetal Alcohol Syndrome (FAS), Partial Fetal Alcohol Syndrome (partial FAS), Alcohol Related Neurodevelopmental Disorder (ARND), and Alcohol Related Birth Defects (ARBD) (Chudley et al., 2005). More recently, the new Diagnostic and Statistical Manual of Mental Health Disorders (DSM-5), has provided the opportunity to diagnose prenatal exposure to alcohol via "Other Specified Neurodevelopmental Disorder (Associated with Prenatal Alcohol Exposure)" (American Psychiatric Association, 2013). FASD is a result of prenatal exposure to alcohol, which can lead to varying levels of brain damage for the unborn child (Clarren & Astley, 1988; Spohr & Steinhausen, 1987; Streissguth, Barr, Kogan, & Bookstein, 1996) and a host of secondary mental health conditions (Coles, Platzman, Raskind-Hood, Brown, Falek, & Smith, 1997; O'Malley & Nanson, 2002). The majority of FASD-impacted individuals do not exhibit visible signs of impairment (Rasmussen, Horne, & Witol, 2006), which makes accurate diagnosis difficult (Malbin, 2004). Many individuals with FASD, regardless of IQ, may not be equipped for an independent lifestyle (Streissguth, Bookstein, Barr, Sampson, O'Malley, & Young, 2004). Fetal Alcohol Spectrum Disorder can also contribute to problematic behaviors and consequences that are difficult to overcome when services and supports are lacking or insufficiently address the specific needs (Pei, Job, Kully-Martens, & Rasmussen, 2011b). These factors can present significant offender reentry challenges for an individual with FASD.

Few studies have been published on the prevalence rates of FASD in correctional settings (Burd, Selfridge, Klug, & Bakko, 2004), but all available evidence suggests that a disproportionately high number of individuals with FASD are involved in the criminal justice system (e.g., offenders, suspects, victims, or witnesses) (Bisgard, Fisher, Adubato, & Louis, 2010; Conry & Fast, 2000). Criminal justice officials are likely to have interactions with persons with FASD frequently (McLachlan, Roesch, Viljoen, & Douglas, 2014). Prevalence rates in

correctional settings have been reported to range from 10% to as high as 24% in two separate studies (Conry & Loock, 1999; MacPherson & Chudly, 2007). An examination of Canadian records found that those with FASD were 19 times more likely to be incarcerated compared to non-FASD-impacted individuals (Popova, Lange, Bekmuradov, Mihic, & Rehm, 2011). Another study in the United States found that 60% of the participants with FASD over the age of 12 had been involved with the criminal justice system (Streissguth et al., 1996).

Key Considerations

The following considerations are provided to promote an increased understanding, appreciation, and awareness regarding the complexities faced by individuals with FASD returning to the community from a correctional setting:

Cognitive Related Issues

Adaptive Behavior. Fetal Alcohol Spectrum Disorder-affected individuals with higher IQ scores may create confusion for professionals. The higher IQ scores may misrepresent the true nature on the person's deficits (Brown et al., 2012) and these individuals may present as "lacking common sense." It is hypothesized that this "lacking common sense," or otherwise known as adaptive behavior deficiencies, are the result of impairments in higher order cognitive functioning and involve issues with the ability to strategically plan (Greenspan, 2008; Ware, Crocker, O'Brien, Deweese, Roesch, Coles, & Matteson, 2012). Adaptive behavior deficiencies in individuals with FASD may be demonstrated by involvement in unwise or simply foolish acts, criminal victimization, naïve criminal conduct, incompetent parenting, false confession behavior, household accidents, health mistakes, and poor driving decisions (Greenspan, 2008).

Cognitive Deficits. Neurocognitive deficits are an additional consequence of FASD (Gibbard, Wass, & Clarke, 2003; Paley & O'Connor, 2011), which may place these vulnerable individuals at a significant disadvantage throughout various stages of the criminal justice system (e.g., arrest, investigative interviewing, trial process, prison, and community supervision). Information processing problems and diminished IQ are also common deficits observed among individuals with FASD (Kodituwakku, 2009; Vaurio, Riley, & Mattson, 2011). Interestingly, persons with FASD who tested higher on IQ in one study, tended to have more involvement with the criminal justice system compared to lower IQ participants (Streissguth et al., 1996). Individuals with FASD also frequently exhibit cognitive immaturity (Church & Kaltenbach, 1997).

Educational Achievement. Individuals with FASD frequently experience an increased prevalence of learning disabilities (Burd et al., 2003). However, even FASD-affected persons with average to above average IQs are at risk for a host of difficulties in educational settings (Green, 2007). Children with FASD often have deficits in mathematics, reading, and spelling abilities (Duquette & Stodel, 2005; Kodituwakku 2009; Mattson, Riley, & Gramling, 1998; Willoughby, Sheard, Nash, & Rovet, 2008). Behavioral problems at school are also frequently observed amongst children with FASD (Olson, Oti, Gelo, & Beck, 2009; Olson, Sampson, & Barr, 1992). Additionally, disruptive behaviors are commonly observed in children with FASD (Ware, O'Brien, Crocker, Deweese, Roesch, Coles, Kable, May, Kalber, Sowell, Jones, Riley, & Mattson, 2013), which can contribute to increased academic challenges. Children with FASD

may be labeled "problematic" in early educational settings, but too often these educators lack the awareness and understanding of FASD (Thiel, Baladerian, Boyce, Cantos, Davis, Kelly, Tavenner, Mitchell, & Stream, 2010). Truancy issues are also common among youth with FASD and a large longitudinal study, which comprised primarily of individuals with IQs in the average to above average range (86%) found that 61% of the participants experienced a disrupted school experience (Streissguth et al. 2004). Individuals with FASD may also be unable to generalize learning from one environment to another (Burgess & Streisthguth, 1992). This inability to take what is learned in one environment and apply the learning to another environment is many times seen as willful non-compliance, when in fact, the behavior is most likely related to FASD.

Executive Functioning or Higher Order Cognitive Processes. Executive functioning deficits are commonly associated with FASD (Malbin, 2004) and are often associated with impulsivity, diminished ability to learn from consequences, learning and memory impairments (Fast & Conry, 2009), verbal reasoning complications, and/or emotional regulation deficits (Rasmussen, 2005). Problem solving and planning are also difficult tasks for individuals with FASD (Mattson, Crocker, & Nguyen, 2011).

Memory Deficits. Individuals with FASD often experience memory-related deficits (Gray & Streissguth, 1990; Kaemingk &, Halverson, 2000; Manji, Pei, Loomes, & Rasmussen, 2009; Mattson & Roebuck, 2002; Olson, Feldman, Streissguth, Sampson, & Bookstein, 1998). The ability to recall information is a common deficit experienced by persons with FASD and may contribute to the individual failing to show up for court, following conditions of release, and/or repeated violations of the law (Mela & Luther, 2013). These problems may be heightened as a result of an apparent increased risk of source-monitoring deficits (Kully-Martens et al., 2012).

Motor Skill Deficits. Individuals with FASD may experience motor control deficits (e.g., clumsiness, unusual body movements, and abnormal gait) (Coles, 2011; Conn-Blower, 1991; Roebuck, Mattson, & Riley, 1998). To the unsuspecting onlooker, this may give the impression that the individual is intoxicated or under the influence of an illegal substance. Additionally, this may increase an individual's vulnerability and subsequent victimization. These motor control deficits may also limit potential employment opportunities for the FASD-impacted individual as they return to the community.

Social Skills. Social maladjustment is a common deficit seen in young adults with FASD (Fagerlund, Autti-Ramo, Kalland, Santtila, Hoyme, Mattson, Korkman, 2012). Often, those with FASD lack the ability to effectively identify dangerous people and situations (Streissguth, Aase, Sterling, Clarren, Randels, & LaDue, 1991). Furthermore, individuals with FASD are often eager to please people (Thiel et al., 2010), including strangers and persons in authoritative roles. Children with FASD often exhibit an increase in cheating, dishonesty, and stealing behaviors compared to non-FASD youth (Nash, Rovet, Greenbaum, Fantus, Nulman, & Koren, 2006). Lacking effective social judgment and skills can be factors that increase the likelihood of criminal justice involvement, either as a defendant or victim of a crime (Edwards & Greenspan, 2010).

Environmentally Related Issues

Attachment Problems. FASD-impacted children experience high rates of foster care and out of home placements compared to non-alcohol exposed children (Stratton, Howe, & Battaglia, 1996), which may lead to disruptions in attachment. A high percentage of children with FASD experience insecure attachment patterns (O'Connor, Kogan, & Findlay, 2002). Children impacted by FASD (with significant disruptions in their home environment) may be at an increased risk for health consequences and reduced access to services and supports (Mekonnen, Noonan, & Rubin, 2009). The propensity for individuals to form strong interpersonal bonds is the standard definition of attachment. Children who are loved and have developed secure attachments are more likely to have the capacity to develop healthy loving relationships (Cortina & Marrone, 2003).

Employment. Individuals with FASD regularly experience difficulties in employment-related arenas. In one large longitudinal study, where the majority (80%) of participants had an average to above average IQ, many had problems with employment (Streissguth et al., 1996). Finding employment can be a complex process. Individuals with FASD that are involved in the criminal justice system often have inconsistent work histories, poor credit records, limited social skills, and previous criminal conviction histories. All of these factors, along with impairments associated with FASD, can make the process of finding and maintaining employment extremely difficult. For those with FASD, the act of applying and subsequently interviewing for a job can be an overwhelming experience.

Family Support. Children with FASD are often raised in unstable home environments (Olson et al., 2009; Streissguth et al., 1996). Parents with FASD often do not seek services and supports to help them with their disabilities and limitations. They often fear that others will view them as ineffective caregivers (Rutman & Van Bibber, 2010). Parents with FASD many times struggle with academic and adaptive behavior deficits attributed to FASD that impair their ability to read or comprehend legal requirements, remember instructions and commitments, and to focus on parenting tasks. Many of these parents would benefit from reminders for and transportation to appointments, support networks such as FASD support groups, and informal social supports for parents with FASD. Reading materials, including information on FASD that can be understood by the parent (Abraham & Hardy, 2006) may also aid in developing effective parenting skills. Parents of children with FASD may experience disruptions in the parent-child relationship due to the challenges of raising a child with FASD (Paley & O'Connor, 2011). FASD-affected children also experience higher rates of foster care and institutional placements compared to non-FASD-impacted adolescents (Astley, Stachowiak, Clarren, & Clausen, 2002; Stratton et al., 1996). Often, these adverse family experiences can lead to maladaptive coping strategies for FASD-impacted youth (Brown et al., 2012). As previously noted, as high as 80% of children with FASD experience insecure attachment patterns (O'Connor et al., 2002). These factors can contribute to the youth becoming involved in the criminal justice system and other adverse consequences (Baumbach, 2002; Fast et al., 1999; Mekonnen et al., 2009; Moore & Green, 2004). When children with FASD are involved in the criminal justice system the legal system can be a confusing and stressful experience for family members of the FASD-impacted defendant (Fast & Conry, 2009). When individuals with FASD are released from correctional facilities, they will need assistance in building a support system that understands the unique

challenges of this condition (Wartnik & Brown, 2012), especially guidance and support from family and loved ones. When such support is not in place, these highly vulnerable individuals may experience increased rates of recidivism.

Family Violence. Individuals with FASD, as children and youth, often experienced a chaotic home life, as well as exposure to multiple forms of violence. Without proper supports and treatments, FASD-affected individuals are more likely to continue these cycles of abuse throughout adulthood. Children with FASD who have experienced trauma exposure frequently have profound deficits in language, learning, memory, and motor development compared to non-exposed adolescents (Henry, Sloane, & Black-Pond, 2007). This can impact multiple domains of functioning, including: academic, emotional, interpersonal, physical, and/or social development.

Homelessness. Poverty and homelessness are factors that may be more common to adults with FASD when proper services and supports are not in place (Rutman & Van Bibber, 2010). When the adult with FASD has a child, unsafe or insufficient living environments may result in child protection involvement. Many individuals with FASD also lack a concrete plan for their future (e.g., education, financial, housing, vocation, etc.) (Burnside & Fuchs, 2013). Without proper ongoing support and services, adults with FASD may end up as homeless (Rutman & Van Bibber, 2010). Deficits in decision making and planning are frequently observed in individuals with FASD (Nicholson, 2008), which may also exacerbate the risk of homelessness.

Housing. Without proper supports and services, individuals with FASD frequently may have problems living independently. Adults with FASD often encounter financial difficulties (Clark, Minnes, Lutke, Ouellette-Kuntz, 2008). Poor social boundaries are also common in individuals with FASD (e.g. allowing others to live in the apartment against the terms of the lease). Moreover, they may have difficulty adhering to housing rules or lease agreements in part due to executive functioning deficits.

Parenting. Many parents with FASD may fear that others will view them as ineffective caregivers (Rutman & Van Bibber, 2010). Parents with FASD may also have difficulty using appropriate forms of discipline during child rearing (Rutman & Van Bibber, 2010). Additionally, parents with FASD may at times lack patience and appropriate time management skills (Rutman & Van Bibber, 2010), which can be problematic when parenting a child. As previously mentioned, parents with FASD often do not seek services and supports to help them with their disabilities and limitations (Rutman & Van Bibber, 2010). It is important to note that mothers with FASD are at increased odds of giving birth to a child who has been exposed to alcohol prenatally (Astley, Bailey, Talbot, & Clarren, 2000) because of their own alcohol use during pregnancy. Early intervention and education about the harmful effects of consuming alcohol while pregnant is crucial. Intervention strategies that may be beneficial when working with adults impacted by FASD, who have children, include the use of memory aids (e.g., calendars, schedules, organizers, post-it notes, etc.), consistent scheduling, and teaching the individual appropriate boundaries and proper forms of discipline (Rutman & Van Bibber, 2010).

Victimization. A history of trauma including exposure to abuse, maltreatment, and violence is common to many individuals with FASD (LaDue, Streissguth, & Randles, 1992). As such, persons with FASD are often vulnerable and commonly victimized. Adults with FASD

may tend to associate with negative peer groups that can lead to an increased risk of victimization and exploitation. Examples of a negative peer social group may include abusive and violent relationships, chemical abusing associates, involvement with those who exhibit predatory behaviors, and incorporation into gangs (Rutman & Van Bibber, 2010). Financial exploitation is another concern impacting FASD-affected individuals. FASD-impaired youth are easily vulnerable to manipulation, peer pressure (Brown et al., 2012; Clark, Lutke, Minnes, & Ouellette-Kuntz, 2004), and suggestibility (Pollard, Trowbridge, Slad, Streissguth, Laktonen, & Townes, 2004). This may contribute to an increased risk for sexual and physical mistreatment (Streissguth et al., 1996). Additionally, FASD-impacted individuals are commonly exposed or have experienced severe trauma (e.g. neglect, physical, psychological, and sexual abuse) earlier in life. Moreover, these individuals may struggle with the ability to recognize thoughts and feelings associated with trauma, which can impact the accuracy of reports to authorities (Thiel et al., 2010). This may lead to additional victimization, mental health problems, substance use, and believing what happened to them is normal, thus acting out that behavior on others.

Legal Related Issues

Confabulation. Confabulation is common among individuals with FASD (Baumbach, 2002; Brown, Long-McGie, Oberoi, Wartnik, Wresh, Weinkauf, & Falconer, 2014; Brown, Gudjonsson, & Connor, 2011; Fast & Conry, 2009; Kully-Martens, Pei, Job, & Rasmussen, 2012). Individuals with FASD may unintentionally provide inaccurate information to law enforcement or probation officials because of their suggestibility and difficulty in conveying events in a logical sequence (Fast & Conry, 2009). This may lead to false arrest and subsequent wrongful imprisonment. Furthermore, mental health professionals should be aware of the possibility of confabulation among individuals with FASD involved in sex offender treatment (Baumbach, 2002. Clinicians should also be aware of the possibility that individuals with FASD may inaccurately provide false explanations of prior sexual wrong doings (Baumbach, 2002). This may lead to additional criminal justice involvement, and may place professionals, parents, and others at risk for false accusations. There is no doubt that the issue of confabulation and FASD create significant ethical and legal challenges for criminal justice professionals.

Court. Legal professionals often lack training and knowledge to recognize the degree of impairment in defendants with FASD (Jeffery, 2010). Individuals with FASD may give all outward appearances that they understand their constitutional rights, yet due to their cognitive disabilities, they frequently lack such comprehension (Douds, Stevens, & Sumner, 2013), to include the criminal trial process (Brown et al., 2011; McLachlan et al., 2014). Defendants with FASD may be at a greater likelihood to provide the court with unreliable testimony and present with an inability to provide factual accounts (Gagnier, Moore, & Green, 2011), due to the impairments associated with their disability. Under-identification of FASD in subsequent legal proceedings can place these defendants at a significant disadvantage in the criminal trial process (Gagnier et al., 2011). Some professionals have recommended specialized problem-solving courts to address the unique challenges of those with FASD involved in the legal system (Mitten, 2004). Important to note, FASD may prevent individuals from successfully engaging in and completing various aspects of court-mandated requirements (Malbin, 2004). Legal professionals should also consider the possibility of FASD when a defendant has consistent and ongoing

involvement with the criminal justice system for various criminal offenses (Malbin, 2004). This of course can only be confirmed by a comprehensive FASD evaluation.

Incarceration. Individuals with FASD often present unique challenges in correctional settings. Detection and screening of FASD in correctional settings is lacking (Brown et al., 2012). Correctional facilities should regularly screen for FASD among an offender population (Fast & Conry, 2009). Individuals with FASD involved in various criminal justice settings may exhibit superficial charm and appropriate verbal skills (Mela, & Luther, 2013), giving the illusion that they do not suffer from severe cognitive impairments. This presents a false impression that these individuals are more capable than they actually are. This may place these highly vulnerable inmates at an increased disadvantage within correctional settings, as well as high risk for failure post-release. FASD-impacted persons are also at an increased risk of experiencing victimization and exploitation by other inmates. Furthermore, FASD-related impairments may also impact the ability to comply with multi-step instructions and commands given by correctional staff. Additionally, few prison-based treatment programs have been adapted to meet the unique challenges associated with incarcerated individuals with FASD (Brintnell, Bailey, Sawhney, & Kreftin, 2011; Chartrand & Forbes-Chilibeck, 2003).

Juvenile Delinquency. It is believed that a high percentage of adolescents serving sentences in juvenile detention facilities may in fact have undiagnosed FASD (Streissguth et al., 1996). Children with FASD are often raised in unstable home environments (Olson et al., 2009; Streissguth et al., 1996). Often, these adverse family experiences can lead to maladaptive coping strategies for FASD-impacted youth (Brown et al., 2012). These factors may contribute to the youth becoming involved in the criminal justice system and other adverse consequences (Baumbach, 2002; Fast et al., 1999; Moore & Green, 2004). It is important to note that conduct disorder is a commonly associated co-morbid condition in youth with FASD who are involved in the juvenile justice system (Conry, Fast, & Loock, 1997). Commonly reported crimes often committed by youth with FASD include disorderly conduct-type offenses, failing to comply with rules, theft, and vandalism (Conry et al., 1997).

Law Enforcement. Law enforcement officers should be aware of the complexities associated when interviewing a suspect, victim, or witness with FASD (Laporte, McKee, Lisakowski, Chudley, & Conry, 2003). During initial police questioning, individuals with FASD may become confused due to an impaired ability of processing auditory and verbal communication (Fast & Conry, 2004; Fast & Conry, 2009; Laporte et al., 2003; Malbin, 2004). Comprehension of *Miranda* rights is often diminished among individuals with FASD (McLachlan et al., 2014).

Sexual Offending. Inappropriate sexual behavior is common among individuals with FASD (Novick, 1997). Poor understanding of social boundaries may contribute to inappropriate sexual behaviors (Brown et al., 2012). It is believed that a high number of individuals in sex offender treatment programs have been exposed to alcohol prenatally (Baumbach, 2002). In a life history involving over 400 individuals with FASD, the authors noted that 39% of the children, 48% of the adolescents, and 52% of the adults exhibited inappropriate sexual behavior of which 19% of the males in the study had trouble with the law as a result of the behavior (Streissguth et al., 2004). While data is unavailable regarding the percentage of individuals with

FASD who are in sex offender treatment programs, estimates of the total offender population in America suggest that those with intellectual disability or those with borderline intellectual deficiency may be overrepresented in correctional settings (Nezu, Nezu & Dudek, 1998). Individuals with FASD also experience executive functioning deficits, emotional immaturity, and typically have a decreased understanding of cause and effect relationships. These impairments may contribute to sexually inappropriate behaviors. Youth with FASD often do not recognize or comprehend non-verbal social cues, which may result in inappropriate sexual advances (McGee, Bjorkquist, Price, Mattson, & Riley, 2009). Additionally, FASD-affected individuals often have a poor understanding of general social clues and may demonstrate poor judgment (Fast & Conry, 2009), thus increasing the risk of engaging in inappropriate encounters with other people.

Treatment/Rehabilitation Related Issues

Community Supervision. Individuals with FASD often fail to comply with probation requirements (Fast & Conry, 2009; Mela & Luther, 2013). Probation officers need to be aware that individuals with FASD often struggle with following rules (Fast & Conry, 2009), due to impairments associated with their condition. Traditional methods of community supervision may lack effectiveness with FASD-impacted probationers. Frequently, without interventions and services, individuals with FASD serving a sentence in a correctional facility will return to the community without the tools to be successful (Wartnik, Brown, Connor & Adler, 2011). For example, an individual ordered to attend treatment or regularly submit to drug and alcohol testing, may fail to complete these requirements of their probation. Deficits in executive functioning, memory, and a high comorbidity of mental health and substance use concerns, can all contribute to the unintentional violation of conditions of probation/release.

Diagnostic Comorbidity. Many individuals with FASD present with a number of mental health challenges. Frequently, these individuals experience serious mental health symptoms and are often simultaneously diagnosed with other major mental conditions. These conditions often include: Antisocial Personality Disorder (ASPD), Attention Deficit/Hyperactive Disorder (ADHD), learning disorders, Reactive Attachment Disorder (RAD), Oppositional Defiant Disorder (ODD), and Conduct Disorder (CD) (Burd, Klug, Martsolf, & Kerbeshian, 2003; Coles et al., 1997; Green, Mihic, Nikkel, Stade, Rasmussen, Munoz, & Reynolds, 2009; Malbin, 2004; O'Malley & Nanson, 2002). These other diagnoses may pose their own unique challenges and should be thoroughly investigated and considered when developing intervention strategies. The presence of FASD may result in standard treatments for the comorbid conditions being rendered ineffective or counter-indicated. Individuals with FASD may be more prone to other head-related injuries throughout life (Fast & Conry, 2009), which may be partially related to other secondary conditions (e.g. ADHD, executive functioning impairments, mental health and substance use diagnoses, etc.).

Impulsivity. Impulsivity is often associated with FASD (Mattson & Riley, 2000). Individuals with FASD may not "act before thinking" (Fast & Conry, 2004) and may not fully consider consequences of waiving their right to an attorney, giving false statements, and/or other

procedural decisions (Brown, Wartnik, Connor, & Adler, 2010). Delinquent behaviors are commonly linked to impulsivity (McDonald, Colombi, & Fraser, 2009; Peadon & Elliott, 2010), which may continue to lead to ongoing legal issues. A FASD-impaired individual can be extremely sensitive to disruptions, resulting in increased impulsive-type behaviors, as well as over stimulation due to noise and or crowds. In a correctional or court room setting, criminal justice professionals should be aware of these factors and how they may contribute to increased impairments and complications in the individual with FASD.

Sleep-Related Issues. Individuals with FASD frequently experience profound sleep-related problems (Ipsiroglu, McKellin, Carey, & Loock, 2013; Jan, Owens, Weiss, Johnson, Wasdell, & Freeman, 2008). Emotional regulation deficits are common to persons with FASD (Burden, Andrew, Saint-Armour, Meinties, Molteno, Hoyme, & Jacobson, 2009; Connor, Sampson, Bookstein, Barr, & Streissguth, 2000; Fryer, Tapert, mattson, Paulus, Spadoni, & Riley, 2007; Vaurio, Riley, & Mattson, 2008), which may contribute to a variety of sleep-related complaints. Children with FASD may lack the ability to engage in self-calming behaviors (Westrupa, 2013), which may further exacerbate sleep complaints. Aggressiveness can be a common reaction for individuals with FASD (Popova et al., 2011), particularly when under stress and chronically sleep-deprived. Furthermore, chronic sleep problems can negatively impact emotional and physical health (Belleville, Guay, & Marchand, 2009). Sleep-related deficits have been found to negatively impact memory, mood, and motivation, resulting in an increase in anger, irritability, impulsivity, and problematic behavioral issues (Anderson, & Platten, 2011; Gregory & Sadeh, 2012; Kamphuis, Dijk, Spreen, & Lancel, 2014; Shanahan, Copeland, Angold, Bondy, & Costello, 2014). As such, there is an increased likelihood that important appointments (e.g., housing, mental health, medical, probation, etc.) are forgotten.

Substance Abuse. Individuals with FASD are at an increased risk to abuse illegal substances (Streissguth et al., 1996; Streissguth, 2004). Impaired judgment, poor impulse control, and a high comorbidity of mental health conditions may exacerbate the use of substances. Individuals with FASD are also more likely to be impacted by negative peer groups who may engage in substance using behaviors. Collaboration with substance use treatment providers who understand the complexities of FASD is highly recommended, especially as the individual re-enters the community from correctional settings.

Suicide Risk. Individuals with FASD have high rates of substance abuse, as well as high rates of depression and other stress-induced mental illnesses (Hellemans, Verma, Yoon, Yu, & Weinberg, 2008; Hellemans, Sliwowska, Verma, & Weinberg, 2010a; Hellemans, Verma, Yoon, Yu, Young, & Weinberg, 2010b; Pei, Denys, Hughes, Rasmussen, 2011a). As such, FASD-impacted individuals are at an increased risk to threaten, attempt, or commit suicide compared to persons without the condition (Streissguth et al., 1996). In addition to experiencing a history of traumatic experiences, individuals with FASD often struggle with other impairments that may impact their overall quality of life and contribute to feelings of low self-worth. Professionals should regularly screen for the potential risk of suicide among clients with FASD.

Intervention Strategies

Criminal justice professionals should employ appropriate strategies for individuals with FASD. The acronym D.E.A.R. was developed by our research team to assist professionals with

remembering suggested approaches that may increase positive outcomes for FASD-criminal justice involved individuals. D.E.A.R. is described as follows:

Direct Language. When communicating with an individual that is diagnosed with or suspected to have FASD, use simple and direct language. Be as concrete as possible, as this population has difficulties with abstract thinking. Explain things slowly to allow the individual plenty of time to process what they are being asked, and ask for the individual to explain your questions back to you to ensure comprehension.

Engage Support System. When interviewing an individual that is diagnosed with or suspected to have FASD, be sure to ask whether they carry with them a card of a mentor, advocate, or case worker who can offer support and/or act as an interpreter. Given this population frequently does not understand the consequences of providing police with incriminating statements, avoid leading questions until a member of their support system is present.

Accommodate Needs. When communicating with an individual that is diagnosed with or suspected to have FASD, conduct the session, when possible, in a quiet place without distractions. Give the individual space and avoid verbal confrontation. As this population usually functions at a lower developmental level than their chronological age, adapt your choice of words and your style of communication accordingly.

Remain Calm. When communicating with an individual that is diagnosed with or suspected to have FASD, do not rush, as this will cause stress and may result in the individual becoming overwhelmed. This population is characterized by an inability to manage their emotions, causing situations to escalate quickly. It is necessary to maintain a calm and collected demeanor with this population.

Conclusion

Numerous studies on FASD have provided significant evidence that supports the seriousness of this condition and how it may impact the lives of individuals on multiple levels. The consequences of FASD-related issues may contribute to a host of adverse outcomes and negatively impact successful reintegration from a correctional setting back into the community. Individuals with FASD frequently lack the ability to be self-sufficient upon release from correctional settings when supports and services are not in place. Well-intentioned professionals may inadvertently not recognize or understand the complexities associated with FASD (Brown, Oberoi, Long-McGie, Wartnik, Weinkauf, & Herrick, 2014). Recognition and knowledge of FASD by professionals working within the arena of offender reentry may prevent future criminal justice involvement for these highly vulnerable individuals. Professionals should remember that it is vital to individualize approaches when providing services to someone with FASD, as well as consult with FASD experts in the field.

References

Abraham, V., & Hardy, C. (2006). *Parenting needs of parents with FASD*. [Poster presented at UBC interprofessional continuing education late adolescents and adults with FASD conference: Navigating the rapids: Doing what works in practice.] Vancouver, BC, Canada.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders.* (5th ed.). Washington DC: Author.

Anderson, C., & Platten, C. R. (2011). Sleep deprivation lowers inhibition and enhances impulsivity to negative stimuli. *Behavioural Brain Research*, *217*(2), 463-466.

Astley, S.J., Bailey, D., Talbot, C., & Clarren, S.K. (2000). Fetal alcohol syndrome (FAS) Primary prevention through FAS diagnosis: I. Identification of high-risk birth mothers through the diagnosis of their children. *Alcohol and Alcoholism, 35*(5), 499-508.

Astley, S.J., Stachowiak, J., Clarren, S.K., & Clausen, C. (2002). Application of the fetal alcohol syndrome facial photographic screening tool in a foster care population. *Journal of Pediatrics, 141*, 712–717.

Baumbach, J. (2002). Some implications of prenatal alcohol exposure for the treatment of adolescents with sexual offending behaviors. *Sexual Abuse: A Journal of Research and Treatment, 14*, 313-327.

Belleville, G., Guay, S., & Marchand, A. (2009). Impact of sleep disturbances on PTSD symptoms and perceived health. *The Journal of Nervous and Mental Disease*, *197*(2), 126-132.

Bisgard, E. Fisher, S., Adubato, S., & Louis, M. (2010). Screening, diagnosis, and intervention. *Journal of Psychiatry & Law, 38*(4), 475-506.

Brintnell, S.E., Bailey, P.G., Sawhney, A. & Kreftin, L. (2011*).* Understanding FASD: Disability and social supports for adult offenders. In E.P. Riley, S. Clarren, J. Weinberg & E. Jonsson (Eds.). *Fetal Alcohol Spectrum Disorder: Management and Policy Perspectives of FASD* (pp. 233-257). Germany: Wiley-Blackwell.

Brown, N. N., Connor, P. D., & Adler, R. S. (2012). Conduct-disordered adolescents with Fetal Alcohol Spectrum Disorder intervention in secure treatment settings. *Criminal Justice and Behavior, 39*(6), 770-793.

Brown, N., Gudjonsson, G., & Connor, P. (2011). Suggestibility and Fetal Alcohol Spectrum Disorders: I'll Tell You Anything You Want to Hear. *The Journal of Psychiatry & Law, 1*, 39-73.

Brown, J., Oberoi, P., Long-McGie, J., Wartnik, A., Weinkauf, E., & Herrick, S. (2014). Fetal Alcohol Spectrum Disorders (FASD) and Confabulation: A Review for Criminal Justice. Fetal Alcohol Forum, 11, 40-44.

Brown, J., Long-McGie, J., Oberoi, P., Wartnik, A., Wresh, J., Weinkauf, E., & Falconer, G. (2014). Confabulation: Connections between Brain Damage, Memory, and Testimony. *Journal of Law Enforcement, 3*(5), 1-11.

Brown, J, & Bednar, L. (2004). Challenges of parenting children with a fetal alcohol spectrum disorder: a concept map. *Journal of Family Social Work, 8*(3), 1-18.

Brown, N. N., Wartnik, A. P., Connor, P. D., & Adler, R. S. (2010). Proposed model standard for forensic assessment of fetal alcohol spectrum disorders. *American Journal of Psychiatry & Law, 38*, 383-418

Burd, L., Klug, M.G., Martsolf, J.T., & Kerbeshian, J. (2003). Fetal alcohol syndrome: neuropsychiatric phenomics. *Neurotoxicology and Teratology, 25*, 697–705.

Burd, L., Selfridge, R., Klug, M., & Bakko, S. (2004). Fetal alcohol syndrome in the United States corrections system. *Addiction Biology, 9*, 169-176.

Burden, M. J., Andrew, C., Saint-Armour, D., Meinties, E. M., Molteno, D. D., Hoyme, H. E., & Jacobson, S. W. (2009). The effects of fetal alcohol syndrome on response execution and inhibition: An event-related potential study. *Alcoholism: Clinical and Experimental Research, 33*, 1994-2004.

Burnside, L., & Fuchs, D. (2013). Bound by the clock: The experiences of youth with FASD transitioning to adulthood from child welfare care. *First Nations Child & Family Caring Society of Canada, 8,* 40-61.

Burgess, D, & Streisguth, A. (1992). Fetal alcohol syndrome and fetal alcohol effects: principles for educators. *The Phi Delta Kappan*, *74*(1), 24-26, 28, 30

Chartrand, L.N, & Forbes-Chilibeck, E.M. (2003). The Sentencing of offenders with fetal alcohol syndrome. *Health Law Journal, 11*, 35-70.

Chudley, A. E., Conry, J., Cook, J. L., Loock, C., Rosales, T. & LeBlanc, N. (2005). Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis. *The Canadian Medical Association Journal*, *172*, 1–21.

Church, M., & Kaltenbach, J. (1997). Hearing, speech, language, vestibular disorders in the fetal alcohol syndrome: A literature review. *Alcoholism, Clinical and Experimental Research, 21*, 495-412.

Clark, E., Lutke, J., Minnes, P., & Ouellette-Kuntz, H. (2004). Secondary disabilities among adults with fetal alcohol spectrum disorder in British Columbia. *Journal of Fetal Alcohol Syndrome International, 2*, 1-12.

Clark, E., Minnes, P., Lutke, J., & Ouellette-Kuntz, H. (2008). Caregiver perceptions of the community integration of adults with foetal alcohol spectrum disorder in British Columbia. *Journal of Applied Research in Intellectual Disabilities, 21*, 446–456.

Clarren, S.K., & Astley, S.J. (1988). Physical anomalies and developmental delays in non-human primate infants exposed to weekly doses of ethanol during gestation. Teratology, 37, 561-569.

Coles, C. (2011). Discriminating the Effects of Prenatal Alcohol Exposure from Other Behavioral and Learning Disorders. *Alcohol Research & Health, 34*, 42-50.

Coles, C. D., Platzman, K. A., Raskind-Hood, C. L., Brown, R.T., Falek, A., & Smith, I. E. (1997). A comparison of children affected by prenatal alcohol exposure and attention deficit, hyperactivity disorder. *Alcoholism Clinical and Experimental Research, 21*(1), 150-161.

Conn-Blower, E.A. (1991). Nurturing and educating children prenatally exposed to alcohol: The role of the counselor. *International Journal for Advancement of Counseling, 14*, 91–103.

Connor, P. D., Sampson, P. D., Bookstein, F. L., Barr, H. M., & Streissguth, A. P. (2000). Direct and indirect effects of prenatal alcohol damage on executive function. *Developmental Neuropsychology, 18*, 331-354.

Conry, J., & Fast, D.K. (2000). *Fetal alcohol syndrome and the criminal justice system*. Vancouver, B.C.: Law Foundation of British Columbia.

Conry, J.L., Fast, D.K., & Loock, C.A. (1997). *Youth in the criminal justice system: Identifying FAS and other developmental disabilities.* Vancouver BC: Final Report to the Ministry of the Attorney General.

Cortina, M. & Marrone, M. (2003). *Attachment theory and the psychoanalytic process*. Philadelphia, PA: Whurr Publishers, Ltd.

Douds, A., Stevens, H., & Sumner, W. (2013). Sword or shield? A systematic review of the roles FASD evidence plays in judicial proceedings. *Criminal Justice Policy Review, 24*(4) 492–509.

Duquette, C. & Stodel, D.L. (2005). School experiences of students with fetal alcohol spectrum disorder. *Exceptionality Education Canada, 15*, 51-75.

Edwards, W., & Greenspan, S. (2010). Adaptive behavior and fetal alcohol spectrum disorders. *Journal of Psychiatry & Law, 38*, 419-447.

Fagerlund, A., Autti-Ramo, I., Kalland, M., Santtila, P., Hoyme, E., Mattson, S., & Korkman, M. (2012). Adaptive behaviour in children and adolescents with foetal alcohol spectrum disorders: a comparison with specific learning disability and typical development. *European Child & Adolescent Psychiatry, 21*, 221–231.

Fast, D., & Conry, J. (2004). The challenge of fetal alcohol syndrome in the criminal legal system. *Addiction Biology, 9*, 161-166.

Fast, D. K., & Conry, J. (2009). Fetal alcohol spectrum disorders and the criminal justice system. *Developmental Disabilities Research Reviews*, *15*(3), 250-257.

Fast, D. K., Conry, J., & Loock, C. A. (1999). Identifying fetal alcohol syndrome among youth in the criminal justice system. *Journal of Developmental & Behavioral Pediatrics, 20*(5), 370-372.

Fryer, S. L., Tapert, S. F., Mattson, S. N., Paulus, M. P., Spadoni, A. D., & Riley, E. P. (2007). Prenatal alcohol exposure affects frontal-striatal BOLD response during inhibitory control. *Alcoholism: Clinical and Experimental Research, 31*, 1415-1424.

Gagnier, K., Moore, T., & Green, M. (2011). A need for closer examination of FASD by the criminal justice system: Has the call been answered? *Journal of Population Therapeutics and Clinical Pharmocologyl, 18*(3), e426-e439.

Gibbard, W. B., Wass, P., & Clarke, M. E. (2003). The neuropsychological implications of prenatal alcohol exposure. *The Canadian Child and Adolescent Psychiatry Review, 12*, 72-76.

Gray, J. & Streissguth, A. P. (1990). Memory deficits and life adjustment in adults with fetal alcohol syndrome: A case control study. *Alcoholism: Clinical & Experimental Research*, 14: 294

Green, C. R., Mihic, A. M., Nikkel, S. M., Stade, B. C., Rasmussen, C., Munoz, D. P., & Reynolds, J. N. (2009). Executive function deficits in children with fetal alcohol spectrum disorders (FASD) measured using the Cambridge Neuropsychological Tests Automated Battery (CANTAB). *Journal of Child Psychology and Psychiatry, 50*(6), 688-697.

Green, J. H. (2007). Fetal alcohol spectrum disorders: Understanding the effects of prenatal alcohol exposure and support students. *Journal of School Health*, 77(3): 103–108.

Greenspan, S. (2008). Foolish action in adults with intellectual disabilities: The forgotten problem of risk unawareness. *International Review of Research in Mental Retardation*, *36*, 147-194.

Gregory, A. M., & Sadeh, A. (2012). Sleep, emotional and behavioral difficulties in children and adolescents. *Sleep Medicine Reviews*, *16*(2), 129-136.

Hellemans, K. G., Sliwowska, J. H., Verma, P., & Weinberg, J. (2010a). Prenatal alcohol exposure: fetal programming and later life vulnerability to stress, depression and anxiety disorders. *Neuroscience & Biobehavioral Reviews*, *34*(6), 791-807.

Hellemans, K. G., Verma, P., Yoon, E., Yu, W., & Weinberg, J. (2008). Prenatal alcohol exposure increases vulnerability to stress and anxiety like disorders in adulthood. *Annals of the New York Academy of Sciences*, *1144*(1), 154-175.

Hellemans, K. G., Verma, P., Yoon, E., Yu, W. K., Young, A. H., & Weinberg, J. (2010b). Prenatal alcohol exposure and chronic mild stress differentially alter depressive and anxiety like behaviors in male and female offspring. *Alcoholism: Clinical and Experimental Research*, *34*(4), 633-645.

Henry, J., Sloane, M., & Black-Pond, C. (2007). Neurobiology and neurodevelopmental impact of childhood traumatic stress and prenatal alcohol exposure. *Language, Speech, and Hearing in Schools, 38*, 99–108.

Ipsiroglu, O., McKellin, W., Carey, N., & Loock, C. (2013). "They silently live in terror." Why sleep problems and night-time related quality-of-life are missed in children with a fetal alcohol spectrum disorder. *Social Science & Medicine, 79*, 76-83.

Jan, J., Owens, J.,Weiss, M., Johnson, K., Wasdell, M., & Freeman, R. (2008). Sleep hygiene for children with neurodevelopmental disabilities. *Pediatrics, 122*, 1343-1350.

Jeffery, M. (2010). An Arctic judge's journey with FASD. *Journal of Psychiatry & Law 38*, 585-618.

Kaemingk, K. L. & Halverson, P. T. (2000). Spatial memory following prenatal alcohol exposure: More than a material specific memory deficit. *Child Neuropsychology*, *6*,115–128.

Kamphuis, J., Dijk, D. J., Spreen, M., & Lancel, M. (2014). The relation between poor sleep, impulsivity and aggression in forensic psychiatric patients. *Physiology & Behavior*, *123*, 168-173.

Kodituwakku, P. W. (2009). Neurocognitive profile in children with fetal alcohol spectrum disorders. *Developmental Disabilities Research Reviews, 15*, 218-224.

Kully-Martens, Pei, J., Job, J., & Rasmussen, C. (2012). Source Monitoring in Children With and Without Fetal Alcohol Spectrum Disorders. *Journal of Pediatric Psychology, 37*(7), 725–735.

Ladue, R.A., Streissguth, A.P., & Randles, S.P. (1992). Clinical considerations pertaining to adolescents and adults with fetal alcohol syndrome. In T.B. Sonderegger (Ed), *Perinatal substance abuse: Research findings and clinical implications (pp. 104-131)*. Baltimore, MA: The Johns Hopkins University Press.

Laporte, A., McKee, T., Lisakowski, Z., Chudley, A.E., & Conry, J. (2003). *Fetal alcohol spectrum disorder: FASD guidebook for police officers*. Ottawa, Canada: Royal Canadian Mounted Police.

MacPherson, P., & Chudley, A. E. (2007, March). *FASD: Screening and estimating incidence in an adult correctional population* Presented at the 2nd International Conference on Fetal Alcohol Spectrum Disorder, Victoria BC, (pp. 7-10).

Malbin, D. V. (2004). Fetal alcohol spectrum disorder and the role of family court judges in improving outcomes for children and families. *Juvenile and Family Court Journal, 55*(2), 53-63.

Manji, S., Pei, J., Loomes, C. & Rasmussen, C. (2009). A review of the verbal and visual memory impairments in children with foetal alcohol spectrum disorders. *Developmental Neurorehabilitation*, 12(4): 239–247.

Mattson, S., Crocker, N., & Nguyen, T. (2011). Fetal Alcohol Spectrum Disorders: Neuropsychological and Behavioral Features. *Neuropsychology Review, 21*, 81–101.

Mattson, S.N., & Riley, E.P. (2000). Parent ratings of behavior in children with heavy prenatal alcohol exposure and IQ-matched controls. *Alcoholism: Clinical and Experimental Research, 24*(2), 226–231.

Mattson, S.N., Riley, E.P., & Gramling, L. (1998). Neuropsychological comparison of alcohol-exposed children with or without physical features of fetal alcohol syndrome. *Neuropsychology, 12*, 146–153.

Mattson, S. N. & Roebuck, T. M. (2002). Acquisition and retention of verbal and nonverbal information in children with heavy prenatal alcohol exposure. *Alcoholism: Clinical and Experimental Research*, 26: 875–882.

McDonald, S., Colombi, A., & Fraser, C. (2009*). Paths to Justice Research in Brief.* Research and Statistics Division, Department of Justice Canada. Ottawa, ON.

McGee, C. L., Bjorkquist, O. A., Price, J. M., Mattson, S. N., & Riley, E. P. (2009). Social information processing in children with histories of heavy prenatal alcohol exposure. *Journal of Abnormal Child Psychology, 37*, 817-830.

McLachlan, K., Roesch, R., Viljoen, J., & Douglas, K. (2014). Evaluating the psycholegal abilities of young offenders with fetal alcohol spectrum disorder. *Law and Human Behavior, 38*, 10-22.

Mekonnen R, Noonan K, & Rubin D. (2009). Achieving better health care outcomes for children in foster care. *Pediatric Clinics of North America*, 56, 405–415.

Mela, M., & Luther, G. (2013). Fetal alcohol spectrum disorder: Can diminished responsibility diminish criminal behaviour? *International Journal of Law and Psychiatry, 36*, 46–54.

Mitten, R. (2004). Section 9: Fetal alcohol spectrum disorders and the justice system. From the First Nations and Metis Justice Reform Commission Final Report, 2. Retrieved from http://www.justice.gov.sk.ca/justicereform/volume2/12section9.pdf

Moore, T. E., & Green, M. (2004). Fetal alcohol spectrum disorder (FASD): A need for a closer examination by the criminal justice system. *Criminal Reports, 19*, 99-108.

Nash, K., Rovet, J., Greenbaum, R., Fantus, E., Nulman, I., & Koren, G. (2006). Identifying the behavioural phenotype in fetal alcohol spectrum disorder: Sensitivity, specificity and screening potential. *Archives of Women's Mental Health, 9*, 181-186.

Nezu, C. M., Nezu, A. M., & Dudek, J. A. (1998). A cognitive behavioral model of assessment and treatment for intellectually disabled sexual offenders. *Cognitive and Behavioral Practice*, *5*(1), 25-64.

Nicholson, P. (2008). Beyond bad, mad behaviour: Targeting the needs of people with FASD and mental health issues. *The Journal of Addiction and Mental Health, 12*(2), 12-13.

Novick, N. (1997). FAS: Preventing and Treating Sexual Deviancy. In: A.P. Streissguth, & J. Kanter, (Eds.) *The challenge of fetal alcohol syndrome: Overcoming secondary disabilities* (pp. 162-170). Seattle, WA: University of Washington Press.

O'Connor, M.J., Kogan, N., & Findlay, R. (2002). Prenatal alcohol exposure and attachment behavior in children. *Alcoholism: Clinical and Experimental Research, 26*(10), 1592–1602.

Olson, H.C., Feldman, J., Streissguth, A. P., Sampson, P. D. & Bookstein, F. L. (1998). Neuropsychological deficits in adolescents with fetal alcohol syndrome: Clinical findings. *Alcoholism: Clinical & Experimental Research, 22*, 1998–2012.

Olson, H.C., Oti, R., Gelo, J., & Beck, S. (2009). Family matters: Fetal alcohol spectrum disorders and the family. *Developmental Disabilities Research Reviews, 15*(3), 235–249.

Olson, H.C., Sampson, P.D., & Barr, H.(1992). Prenatal exposure to alcohol and school problems in late childhood: A longitudinal prospective study. *Developmental Psychopathology, 4*, 341–359.

O'Malley, K. D., & Nanson, J. (2002). Clinical implications of a link between fetal alcohol spectrum disorder and attention-deficit hyperactivity disorder. *Canadian Journal of Psychiatry, 47*(4), 349-354.

Paley, B., & O'Connor, M. J. (2011). Behavioral interventions for children and adolescents with fetal alcohol spectrum disorders. *Alcohol Research & Health*, *34*(1), 64.

Peadon, E. & Elliott, E. J. (2010). Distinguishing between attention-deficit hyperactivity and fetal alcohol spectrum disorders in children: clinical guidelines. *Journal of Neuropsychiatric Disease and Treatment, 6*, 509-515.

Pei, J., Denys, K., Hughes, J., & Rasmussen, C. (2011a). Mental health issues in fetal alcohol spectrum disorder. *Journal of Mental Health*, *20*(5), 473-483.

Pei, J., Job, J., Kully-Martens, K., & Rasmussen, C. (2011b). Executive function and memory in children with fetal alcohol spectrum disorder. *Child Neuropsychology*, *17*(3), 290-309.

Pollard, R., Trowbridge, B., Slade, P. D., Streissguth, A. P., Laktonen, A., & Townes, B. D. (2004). Interrogative suggestibility in a U.S. context: Some preliminary data on normal and FAS/FAE subjects. *Personality and Individual Differences, 37*, 1101-1108.

Popova, S., Lange, S., Bekmuradov, D., Mihic, A., & Rehm, J. (2011). Fetal alcohol spectrum disorder prevalence estimates in correctional systems: a systematic literature review. *Canadian Journal of Public Health, 5*, 336-340.

Rasmussen, C. (2005). Executive functioning and working memory in fetal alcohol spectrum disorder. *Alcoholism: Clinical and Experimental Research*, *29*(8), 1359-1367.

Rasmussen, C., & Bisanz, J. (2009). Executive functioning in children with fetal alcohol spectrum disorders: profiles and age-related differences. *Child Neuropsychology*, *15*(3), 201-215.

Rasmussen, C., Horne, K., & Witol, A. (2006). Neurobehavioral functioning in children with fetal alcohol spectrum disorder. *Child Neuropsychology, 12*, 1-16.

Roebuck, T.M., Mattson, S.N., & Riley, E.P. (1998). A review of the neuroanatomical findings in children with fetal alcohol syndrome or prenatal exposure to alcohol. *Alcoholism: Clinical and Experimental Research, 22*(2), 339–344.

Rutman, D. & Van Bibber, M. (2010). Parenting with Fetal Alcohol Spectrum Disorder. *International Journal of Mental Health Addiction, 8*, 351–361.

Shanahan, L., Copeland, W. E., Angold, A., Bondy, C. L., & Costello, E. J. (2014). Sleep problems predict and are predicted by generalized anxiety/depression and oppositional defiant disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(5), 550-558.

Spohr, H.L. & Steinhausen, H.C. (1987). Follow-up studies of children with fetal alcohol syndrome. *Neuropediatrics, 18*, 13-17.

Stratton, K.R., Howe, C.J. & Battaglia, F.C. (1996). *Fetal alcohol syndrome: Diagnosis, epidemiology, prevention, and treatment.* Washington, DC: National Academy Press.

Streissguth, A.P., Aase, J., Sterling, K., Clarren, M.D., Randels, S.P., & LaDue, R.A., (1991). Fetal alcohol syndrome in adolescents and adults. *Journal of the American Medical Association, 25*, 1961-1967.

Streissguth, A.P., Barr, H.M., Kogan, J. & Bookstein, F. L. (1996, August). *Understanding the occurrence of secondary disabilities in clients with fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE): Final report to the centers for disease control and prevention (CDC).* Seattle, WA: University of Washington, Fetal Alcohol & Drug Unit, Tech. Rep. No. 96-06, (1996).

Streissguth, A. P., Bookstein, F. L., Barr, H. M., Sampson, P. D., O'Malley, K., & Young, J. K. (2004). Risk factors for adverse life outcomes in fetal alcohol syndrome and fetal alcohol effects. *Journal of Developmental & Behavioral Pediatrics*, *25*(4), 228-238.

Streissguth, A. P., & O'Malley, K. (2000). Neuropsychiatric implications and long-term consequences of fetal alcohol spectrum disorders. *Seminars in Clinical Neuropsychiatry, 5*, 177-190.

Thiel, K., Baladerian, N., Boyce, K., Cantos, O., Davis, L., Kelly, K., Tavenner, K., Mitchell, K., & Stream, J. (2010). Fetal alcohol spectrum disorders and victimization: Implications for families, educators, social services, law enforcement, and the judicial system. *Journal of Psychiatry & Law, 39*, 121-157.

Ware, A. L., Crocker, N., O'Brien, J. W., Deweese, B. N., Roesch, S. C., Coles, C. D., & Mattson, S. N. (2012). Executive function predicts adaptive behavior in children with histories of heavy prenatal alcohol exposure and attention deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, *36*(8), 1431-1441.

Ware, A.L., O'Brien, J.W., Crocker, N., Deweese, B.N., Roesch, S.C., Coles, C.D., Kable, J.A., May, P.A., Kalberg, W.O,, Sowell, E.R., Jones, K.L., Riley, E.P., & Mattson, S.N. (2013). The effects of prenatal alcohol exposure and attention-deficit/hyperactivity disorder on psychopathology and behavior. *Alcoholism: Clinical and Experimental Research, 37*(3), 507–516.

Wartnik, A., & Brown, J. (2012). Fetal alcohol spectrum disorders. *Happenings, 1*, 5-10.

Wartnik, A., Brown, N., Connor, P., & Adler, R. (2011). *A multidisciplinary assessment model for adults & adolescents*. Presented at the 3rd International Conference on Fetal Alcohol Spectrum Disorder. Victoria, BC, Canada.

Westrupa, S. (2013). Foetal alcohol spectrum disorders: As prevalent as autism? *Educational Psychology in Practice: Theory, Research and Practice in Educational Psychology, 29*, 309-325.

Willoughby, K.A., Sheard, E.D., Nash, K., & Rovet, J. (2008). Effects of prenatal alcohol exposure on hippocampal volume, verbal learning, and verbal and spatial recall in late childhood. *Journal of the International Neuropsychological Society, 14*, 1022–1033.

Vaurio, L., Riley, E. P., & Mattson, S. N. (2008). Differences in executive functioning in children with heavy prenatal alcohol exposure or attention-deficit/hyperactivity disorder. *Journal of the International Neuropsychological Society, 14*, 119-129.

Vaurio, L., Riley, E. P., & Mattson, S. N. (2011). Neuropsychological comparison of children with heavy prenatal alcohol exposure and an IQ-matched comparison group. *Journal of the International Neuropsychological Society*, *17*(03), 463-473.

About the authors:

Jerrod Brown, MA, MS, MS, MS, is the treatment director for Pathways Counseling Center, Inc. Jerrod is also the founder and CEO of the American Institute for the Advancement of Forensic Studies (AIAFS) and lead developer and program director for an online graduate degree program in Forensic Mental Health from Concordia University, St. Paul, Minnesota.

Sarah Herrick, MA, LP, LPCC, CCFC, has worked with sexual abusers ranging in age from ten to elderly since 1991, in residential, community mental health, and prisons settings. Currently she is working with civilly committed sex offenders.

Jeffrey Long-McGie, MA & MBA, is a Research Fellow at AIAFS, and currently training to become a licensed police officer.

About the contributors:

Blake R. Harris, PhD, obtained his PhD in Clinical Forensic Psychology from the California School of Forensic Studies and has gained invaluable experience in diverse forensic settings.

Kathleen Bischel Beddow, MA, LMFT, is a Licensed Marriage and Family Therapist in private practice. She works with individuals and families experiencing relationship struggles and challenges from Autism Spectrum Disorders (ASD), Fetal Alcohol Spectrum Disorders (FASD), abuse, addiction, divorce or separation, mental illness symptoms and forensic experiences.

Judge Anthony (Tony) Wartnik, BA, JD, was a trial judge for 34 years in King County, Washington and chaired the Washington State Governor's Advisory Panel on FAS/FAE. Judge Wartnik is recognized nationally and internationally as an expert on issues involving FASD and the Justice System.

Tina Jay, AS, BSW, is an advocate for children as a Guardian Ad Litem since 1998, with a background in Early Childhood Education, a Bachelor's Degree in Social Work, and currently pursuing a Master's Degree in Forensic Mental Health.

Erv Weinkauf, MA, is a retired 40-year law enforcement veteran with 19 years of teaching experience. He currently serves as chairperson of the Concordia University Criminal Justice Department in St. Paul.

Janina Wresh, BA, has 19 years of experience in law enforcement working in forensics crime laboratories, courts, and adult detention centers. She has served as a deputy sheriff, police officer, domestic abuse response specialist, crisis intervention specialist, and crime scene technician. Janina also serves as AIAFS' Chief Operating Officer.

Jody Allen Crowe, MS, is the author of *The Fatal Link* and founder and President of Healthy Brains for Children, a charitable nonprofit with a mission of preventing prenatal exposure to alcohol. He is a subject matter expert in preventing prenatal exposure to alcohol.