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FASD and the Juvenile Justice System: A Need for Increased Awareness

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Abstract

Fetal Alcohol Spectrum Disorders (FASD) is a complex and lifelong disorder commonly misunderstood among juvenile justice professionals. Current estimates report between 2 to 5 percent of the general population in North America are impacted by disorders caused by exposure to alcohol prenatally. Even higher percentages have been found in criminal justice and forensic populations. The present article is intended to provide juvenile justice professionals with a general introduction of FASD, with special consideration given to the challenges and complexities this disorder presents among juvenile involved populations.

Keywords: behavior, fetal alcohol spectrum disorders (FASD), juvenile justice, screening

FASD and the Juvenile Justice System: A Need for Increased Awareness

The Juvenile Justice System is a section of the Criminal Justice System with a focus on responses by juvenile justice officials (e.g., police, courts, and corrections) to juvenile delinquency. As originally established, the Juvenile Justice System was a means of "separating non-violent, juvenile offenders considered capable of rehabilitation, from the adult system" (Dixon, 1976, p. 470). The area of juvenile justice is the aspect of criminal law relevant to persons not of an age to be held responsible for criminal misconduct. In most states of the United States, the age for intentional criminal culpability is set at 18 years. Rehabilitation, not punishment is the primary goal of the Juvenile Justice System (Cornell University Law School, 2015). The laws used in this system, as with the Criminal Justice System, are intended to be "blind" to the accused and to be generic to all within its structure. Both systems of justice assume neuro-typical brain function and therefore apply the same approach to all juvenile offenders. In cases where youth engaged with the Juvenile Justice System suffer from cognitive impairment due to brain damage or trauma, genetic abnormalities, or environmental influences, typical behavior modification programs (BMPs) may not be an effective or appropriate form of treatment (Burd, Fast, Conry, & Psych, 2010; Mitten, 2004). Responses to mentally ill or neuro-diverse juvenile offenders are more effective when cognitive differences are acknowledged and addressed appropriately.

One of the most common, most severe, most misunderstood, and least recognized sources of cognitive dysfunction is prenatal exposure to alcohol (Brown, Connor, & Adler, 2012; Leis, Heron, Stuart, & Mendelson, 2012; Rasmussen, Horne, & Witol, 2006; Streissguth, Barr, Kogan & Bookstein, 1996). The resultant physical injury to the brain and to various organs and systems incurred through ethanol exposure pre-birth falls under the umbrella of Fetal Alcohol Spectrum Disorder (FASD). A host of behavioral, emotional, physical, intellectual, cognitive, social and interpersonal consequences and impairments can result from prenatal exposure to alcohol (Chudley, Conry, Cook, Loock, Rosales, & LeBlanc, 2005; Malbin, 2004; O'Malley & Nanson, 2002; Streissguth & O'Malley, 2000). Unfortunately, youth with FASD are significantly more likely to become involved in the criminal justice system compared with neuro-typical adolescents (Baumbach, 2002; Brown, Connor, & Adler, 2012; Fast, Conry, & Loock, 1999; Moore & Green, 2004). Our experience tells us that many juvenile justice professionals lack the appropriate training necessary to detect young people have FASD. The aim of this article is to provide professionals working within juvenile justice settings with an introduction to the challenges and complexities of FASD among juvenile offender populations.

FASD Associated Brain Damage

Although the prevalence of FASD in the general population has been recently found to be between 2 and 5 percent (May et al., 2009; May et al., 2014), this number is most likely underrepresented due to the many challenges that exist in the United States when trying to obtain diagnostic services and support, especially within criminal justice and forensic settings. Awareness and overall diagnostic capacity are seriously lacking (Astley & Grant, 2014). When diagnostic resources become available in a community, many providers do not have the necessary training to conduct multi-modal screening with sufficient reliability to lead to a

diagnosis (Grant et al., 2013). Damage associated with FASD includes failure of certain brain regions to develop (e.g., the corpus callosum), failure of certain cells to migrate to the appropriate locations during embryonic brain development, and a tendency for tissue to die in some brain regions (e.g., the cerebellum) (Lebel et al., 2008). As a result of this damage, juveniles with FASD may be incapable of following or understanding societal rules and expectations (Edward & Greenspan, 2011; Jirikowic et al., 2008; Streissguth, 1997; Whaley, O'Connor, & Gunderson, 2001). A juvenile with damage to the corpus callosum (the connection between the two hemispheres of the brain) may struggle putting rules and instructions into practice (Fast & Conry, 2009). The insult to the frontal lobe damages executive function (e.g., planning, problem solving, decision-making and coping with everyday tasks) (Kodituwakku, 2007; Streissguth, 2007). Damage to the cerebellum can affect movement and motor control and may also impact some cognitive processes such as attention (Stephen et al., 2012). Damage to the basal ganglia may cause issues with time perception. These impairments significantly impede an individual's ability to attend appointments on time or complete projects or assignments within a deadline (Cope, Grube, Singh, Burn, & Griffiths, 2014), which can be highly problematic when an adolescent with FASD is on probation or required to complete certain court-ordered activities.

The severity of neuro-cognitive insult associated with FASD may be moderated by several factors including the genetic and epigenetic contributions of both parents, the period of gestation during which alcohol was consumed, other drug use, the nutrition of the mother, and the dose, timing, and extent of exposure to alcohol. Because of the large variability of factors, it is difficult to predict the type and severity of challenges each person with FASD will face (Thomas, Warren, & Hewitt, 2010). However, the typical, or core deficits of this condition are very likely to bring them into contact with the criminal justice system (Boland, Burrill, Duwyn, & Karp, 1998; Conry & Fast, 2000; Conry, Fast, & Loock, 1997; McLachlan, Roesch, Viljoen, & Douglas, 2014).

FASD and Juvenile Justice

Juvenile justice professionals are likely to come into contact with youth affected by FASD on a regular basis. Our experience tells us that many of these professionals may be unaware that the juvenile has FASD because of lack of proper FASD-specific training, and confusion and misconceptions about the disorder. Adolescents with FASD are unlikely to learn from mistakes and may repeat the same actions over again regardless of the consequences. In some cases, a young person with FASD may have excellent verbal ability, yet may not recognize that cause precedes effect, and is not able to learn from his/her mistakes the same way as a juvenile without FASD who is involved in the justice system. Moreover, youth with FASD often have difficulty generalizing information in order to demonstrate behavior changes. Additionally, FASD affected adolescents typically present with a chronological age that does not reflect their emotional and cognitive development. These are a few examples highlighting obstructions to success currently placed on juveniles with FASD by the Juvenile Justice System. There is a need for increased awareness of FASD by Juvenile Justice Workers particularly as it relates to adolescent brain structure and cognitive development.

For neuro-typical youth, we can make certain underlying assumptions that the legality or right and wrong of an action is known, consequences can be understood as linked to an action and, individuals have the ability to choose actions based on cause and effect reasoning. These assumptions do not hold for juveniles affected by FASD. The deterrent effect of a particular

consequence on a neuro-typical person will not necessarily create the same change in behavior for a young person with FASD who is not neuro-typical. FASD- related damage to the frontal lobe is extremely common with FASD and can cause significant issues with impulse control and executive function (Rasmussen & Bisanz, 2009; Streissguth, 1997), particularly when there is a need to connect cause and effect, learn from mistakes, and generalize learning in different situations. As a result, young people with FASD may need to be taught the same task or concept repeatedly, and may not learn from the consequences of their behavior the first time, or the second time, or indeed, ever. This can be an aggravating process for both the professional and individual. It does not mean, however, that affected youth cannot learn, only that learning from experience or consequences may never happen. Alternative learning strategies will likely have to be implemented for FASD affected youth.

The motivations for committing a crime and the circumstances in which the decision is made to commit the crime will differ in each case. When the reason for the crime is correlated to the impaired decision-making and problem solving capacity of a juvenile with FASD, it is important to use FASD-specific, evidence, practice or wisdom-based interventions specific to FASD instead of generic treatment. A young person with FASD may not respond the same to intervention as a neuro-typical young person because their impaired brain development often does not facilitate the processing of consequences in the same way. Thus, the deterrent value of the punishment will likely be lost on young people with FASD. Young people with FASD will sometimes commit a crime, which is important to them in the moment. They may steal money, food, or take a car for a joy ride. Given that the rationale for committing a crime is likely to differ greatly between a neuro-typical youth and a youth with FASD, the punishment should take the brain differences into consideration. Consider the case studies below as examples of the reasoning and mental processing of a juvenile with FASD who shoplifts.

The following case examples will examine the challenges that FASD juveniles face in the context of the Criminal Justice System. These two cases illustrate how the symptoms of FASD may impact the juvenile's ability to understand and learn from consequences, the cases demonstrate impaired executive functioning, limited ability to control impulses, as well as deficits in memory recall. These cases highlight that youth with FASD may need special considerations when faced with legal issues. Additionally, some parents will continue to advocate for their children with FASD well into their adolescence and beyond. The parents experience in that role is often tarnished with misunderstanding, stigmatization, and shame. Criminal justice and relevant professionals involved with youth justice would benefit from increased awareness and education about FASD together with symptoms and appropriate interventions.

Case Study One: Shoplifting

> A 12-year-old boy with FASD is hanging out with his neuro-typical friends at a convenience store. His friends are all buying candy, which he also wants, but unlike his friends, he does not have the appropriate amount of money. His lack of impulse control, emotional immaturity (similar to a five-year-old), and lack of ability to learn from his mistakes, or indeed to link any consequences to what he is about to do, (e.g., stealing gets me in trouble) leads him to steal the candy.

As he walks out of the store with the candy, he is caught on the surveillance camera and the police are called. Despite the surveillance footage, he repeatedly states that he did not steal candy from the store. He can and does articulate that stealing is wrong and can result in punishment, including being arrested and sent to jail. At first, he has no explanation for how the candy came to be in his possession and then offers several conflicting and improbable scenarios (e.g. he brought it from home, someone gave it to him before he came into the store, and it fell into his bag).

While outwardly he appears to be manipulative, irresponsible, and that his decision making was premeditated or preplanned, it is more likely that he has actually experienced an inability to process, store, and integrate information related to stealing and its consequences and/or lacks the executive function/impulse control to apply what he "knows." In a neuro-typical person the integration of that knowledge with the executive function ability to inhibit impulse would have stopped them from taking the candy. Thus he "reacts" (i.e., steals the candy) before the information is effectively processed (the consequences). That "connection" between his actions (cause) and associated consequences (effect) does not occur for him because of the brain damage from prenatal alcohol exposure. His brain simply cannot establish a link between cause and its effect.

Similarly, his "lying" when caught may not be an attempt to avoid getting in trouble. Individuals with FASD often have very poor short-term memory. It is possible that he may not remember grabbing the candy and will attempt to come up with an explanation that makes sense to him (confabulation). Even if his memory is not affected and he clearly recalls taking the item, the same inability to control impulse and connect consequences with actions may lead him to blurt out a disingenuous answer. There is not so much of an 'intent' to deceive – when clearly there is no avoiding the video evidence – as there is an inability to control his impulse.

Case Study 2: Probation Violation

A 16-year-old girl is placed on probation following an assault on another young woman. The terms of her probation clearly state that she is to attend anger management group sessions, complete 40 hours of community service and observe an 8:00 PM curfew. Two months into her probation period, probation officer issues a bench warrant for probation violations. The probation officer recommends incarceration because she has missed multiple community service hours, engaged in a physical scuffle at her anger management group meeting and most recently lied about the reason for breaking curfew when her probation officer checked in at her home at 8:45 PM.

Once again the image presented is of a non-empathetic, deceptive, and irresponsible young person - one for whom probation should be revoked and

incarceration implemented as a stronger deterrent to the anti-social behaviors she displays. However, since she is diagnosed with FASD, the judge, prosecutor, and public defendant inquire further into the situation that has placed her in front of the court once again. They find that many of the initial requirements placed on this young girl were inappropriate because of her neuro-cognitive deficits. A neuro-psychological profile of the offender is ordered which reveals significant deficits in her understanding of and her ability to manage time. Additionally, she has delayed auditory and cognitive processing, and has general issues with self-regulation and hyper-suggestibility to the moods and responses to others.

Upon investigation it is determined that the altercation at the offender's anger therapy group was likely an effect of the group itself. Typical group therapy often does not work for those with FASD because it is based on cognitive behavioral therapy (CBT) or *talk therapy*. According to research, the literature, and a neuropsychological profile of this offender, CBT and talk therapy are not the best fit for her optimal brain functioning. The hyper-suggestibility also makes her likely to "soak up" and "become like" those influences around her at any given time. Therefore, the altercation following an intense group session with talk of triggers, anger, and relapse stories of others acted as a catalyst for anger. Just being physically located in a group of people can also cause sensory issues, which may result in an outburst. Checking in with her community service assignment uncovered that her schedule for community service hours was variable from week to week in terms of both days and hours, and that in addition to missing scheduled hours, she had often shown up at times when she was not scheduled. Likewise, following up on the "lie" about curfew violation found that she had been late returning from a scheduled group meeting. The absence was in fact because the person transporting her had a family emergency and brought her along to the hospital. She did not really understand who was sick or hurt or why it was necessary for her driver to go to the hospital immediately. Additionally, when calling in, she thought she would be less likely to be in trouble if she just said, "I missed the bus," rather than trying to give a long, jumbled, and possibly inaccurate explanation of what had happened.

The Judge who had experience with FASD and related brain-functioning issues made accommodations for her by amending her probation orders. These amendments, which were simple, provided her with small successes. Her community hours were planned regularly allowing for consistency and predictability within her schedule. Individual therapy sessions were offered rather than group therapy anger management sessions. In addition, she was assigned a counselor competent in the treatment of FASD. The client was also encouraged to advocate for herself by asking for support when communication challenges occurred.

It is clear from the case studies that one-size-fits-all justice may be anything but 'just'. It may be impossible to write legal code that considers all conceivable expressions of neuro divergence, however, the follow up response to violations of the law can afford a more

individualized approach. Each individual with FASD has a unique set of needs and abilities. These individuals need accommodations similar to other persons suffering from more visible disabilities. When working with and guiding a juvenile with FASD through the justice system, it is imperative that in order to have fair and accurate justice for all people, professionals must be responsive to neuropsychological evaluations, as well as rely on the competence of appropriate professionals in the juvenile's care to help determine the best possible success rates. An acceptance and awareness of the symptoms and challenges of juveniles with FASD is vital to their future success in society. Only when this understanding is established can the juvenile justice system determine which unique resources would be most beneficial in promoting pro-social development.

One method of ensuring an individual affected by FASD obtains appropriate resources is by having a confirmed diagnosis on the FASD spectrum. Typically, assessment for FASD includes cognitive/neuropsychological assessments as well as assessments of growth/physical development, facial abnormalities, and family history of alcohol use. The advantage of having a confirmed diagnosis as to where an individual falls on the FASD spectrum can result in knowing the unique cognitive limitations and challenges that apply to that specific person. Recognition of and resources applied to FASD are still woefully short, but there are still more resources for individuals with a confirmed diagnosis. Advocates within the FASD field who help guide children, caregivers, and families through the juvenile justice system, can offer insight and effective techniques.

Youth who suffer from FASD, but do not have a confirmed diagnosis, often experience more difficulties throughout their life. Because our society generally assumes intent, understanding, and willfulness as it relates to behavior and decisions, the actions of undiagnosed youth are often interpreted as intentional, pre-meditated, disrespectful, and manipulative and their communication as belligerent and deliberately deceptive. These same juveniles often believe these same destructive notions about themselves and may spend their lives being misunderstood for something they themselves do not understand. Consequences may be enacted for their behavior, yet the problematic behavior continues to be repeated or escalated. Misunderstanding and frustration may breed a lack of sympathy that perpetuates failure to understand the root cause of their problems.

Conclusion

Our justice system operates under the assumption that a person is innocent until proven guilty. The burden of proof is on the state. All the facts must be presented, all the evidence provided, motives determined, and only then is a decision regarding guilt made. In the case studies presented, the facts appeared to be clear. However, after evaluating the defendants for brain abnormalities, which includes a full neuropsychological assessment of emotional maturity communication skills, executive function, sensory issues and impulse control, it is clear that each situation is different. The assumption that behavior is the result of intent, understanding, and willful decisions must be amended. All behavior, in fact, is brain-based. We cannot expect a person with brain damage from prenatal alcohol exposure to behave in a neuro-typical manner. Therefore, to be effective for people with FASD, consequences and/or treatment should be FASD-informed.

In order to effectively rehabilitate and respond to the influx of juvenile offenders affected by FASD, the Juvenile Justice System must become more aware and educated about all facets of FASD. A good first step may be as simple as incorporating agencies or advocates well versed in

FASD to assist with implementing probation, treatment, and/or parole strategies that work for FASD-affected individuals. Having a screening tool developed for working professionals in the criminal justice field would also be imperative to identify juveniles with FASD. These two efforts alone may assist in reducing cost, frustration, lack of understanding, and eventually recidivism for juveniles with FASD within the justice system overall.

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Anne Russell is the mother of two adult children with Fetal Alcohol Spectrum Disorder [FASD]. In 2000, both her children have been diagnosed and both are now adults. Anne has worked for the last 15 years to help raise awareness of the condition and to help families living with FASD. In 2007, Anne established her own charity the Russell Family Fetal Alcohol Disorders Association [rffada] to pay homage to her children and the family that supported her in her work with FASD. Anne has attended and presented at national and international conferences and workshops in every state and territory in Australia, New Zealand, Canada, and the United States. In 2005, Anne published her first book 'Alcohol and Pregnancy: A Mother's Responsible Disturbance'. Additionally Anne was a Senior Consultant with the FASD Consortium, a group of health professionals, researchers, and community members to develop Australian diagnostic guidelines for FASD. Currently she is a member of the Parent Advisory Group and the Collaboration for Alcohol Related Developmental Disorders at the University of Queensland. Email: anne@mpath.com.au

Judge Anthony P. (Tony) Wartnik served as a trial judge for 34 years, nine of which were on the Bellevue District Court, a limited jurisdiction court, and almost 25 years on the King County, Washington Superior Court, a general jurisdiction court. In the latter capacity, he presided over involuntary mental illness treatment commitment cases, juvenile offender and dependency cases, adult criminal cases, and family law cases in addition to other assigned responsibilities. He chaired a task force in the mid-1990s to establish protocols in Juvenile Court for determining the competency of youth with organic brain damage and chaired the Governor's Advisory Panel of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE). Since retirement from the court in 2005, Tony has served as a consultant to the Fetal Alcohol and Drug Unit, University of Washington, School of Medicine and as the Legal Director/Liaison for FASD Experts, a multidisciplinary Forensic Assessment and Diagnostic Team, and has presented at workshops and conferences throughout the United States, Canada, New Zealand, and Australia. In addition, he has authored and co-authored numerous articles on issues involving Fetal Alcohol related issues, mental health, and other subjects as they relate to the law and the court. Email: TheAdjudicator@comcast.net

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References

Astley, S.J., & Grant, T. (2014). Recommendations from the Washington State Fetal Alcohol Spectrum Disorders Interagency Work Group, December 2014. Seattle, WA: Washington State Fetal Alcohol Spectrum Disorders Interagency Work Group.

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.

Boland, J., Burrill, R., Duwyn, M., Karp, J. (1998). Fetal alcohol syndrome: Implications for correctional service. Ottawa: Correctional Services of Canada, Research Branch Corporate Development.

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.

Burd, L., Fast, D. K., Conry, J., & Psych, R. (2010). Fetal Alcohol Spectrum Disorder as a Market for Increased Risk of Involvement with Correction Systems. *J. Psychiatry & L.*, *38*, 559.

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.

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.

Cope, T. E., Grube, M., Singh, B., Burn, D. J., & Griffiths, T. D. (2014). The basal ganglia in perceptual timing: Timing performance in Multiple System Atrophy and Huntington's disease. *Neuropsychologia*, *52*, 73-81.

Cornell University Law School (2015). Juvenile justice. Retrieved from: https://www.law.cornell.edu/wex/juvenile_justice

Dixon, J. C. (1976). Juvenile Justice in Transition. *Pepperdine Law Review, 4(2),* 469-478.

Edwards, W.J., & Greenspan, S. (2011). Adaptive behavior and fetal alcohol spectrum disorders. *Journal of Psychiatry & Law, 38*, 419-447.

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. (1999). Identifying fetal alcohol syndrome among youth in the criminal justice system. *Journal of Developmental and Behavioral Pediatrics, 20*, 370-372.

Grant, T.M., Brown, N.N., Graham, J.C., Whitney, N., Dubovsky, D., & Nelson, L.A. (2013). Screening in treatment programs for Fetal Alcohol Spectrum Disorders that could affect therapeutic progress. *International Journal of Alcohol and Drug Research, 2*(3), 37-49.

Jirikowic, T., Kartin, D., & Olson, H. C. (2008). Children with fetal alcohol spectrum disorders: A descriptive profile of adaptive function. *Revue Canadienne d'Ergothérapie, 4*(75) 238-248.

Kodituwakku, P. W. (2007). Defining the behavioral phenotype in children with fetal alcohol spectrum disorders: a review. *Neuroscience & Biobehavioral Reviews, 31*(2), 192-201.

Lebel, C., Rasmussen, C., Wyper, K., Walker, L., Andrew, G., Yager, J., & Beaulieu, C. (2008). Brain diffusion abnormalities in children with fetal alcohol spectrum disorder. *Alcoholism: Clinical and Experimental Research*, *32*(10), 1732-1740.

Leis, J. A., Heron, J., Stuart, E. A., & Mendelson, T. (2012). Associations between depressive And anxious symptoms and prenatal alcohol use. *Maternal and Child Health Journal*, *16*(6), 1304-1311.

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.

May, P.A., Baete, A., Russo, J., Elliott, A., Blankenship, J., Kalberg, W.O., Buckley, D., Brooks, M., Hasken, J., AbdulRahman, O., Adam, M., Robinson, M.M., & Hoyme, E. (2014). Prevalence and characteristics of Fetal Alcohol Spectrum Disorders. *Pediatrics, 134*(5), 855-866.

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.

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

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.

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.

Stephen, J. M., Kodituwakku, P. W., Kodituwakku, E. L., Romero, L., Peters, A. M., Sharadamma, N. M., & Coffman, B. A. (2012). Delays in auditory processing identified in preschool children with FASD. *Alcoholism: Clinical and Experimental Research*, *36*(10), 1720-1727.

Streissguth, A. (2007). Offspring effects of prenatal alcohol exposure from birth to 25 years: The Seattle Prospective Longitudinal Study. *Journal of Clinical Psychology in Medical Settings, 14*(2), 81-101.

Streissguth, A.P. (1997). *Fetal alcohol syndrome: a guide to families and communities*. Baltimore, MD: Guilford Press.

Streissguth, A.P., Barr, H.M., Kogan, J. & Bookstein, F. L. (1996). *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.

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.

Thomas, J. D., Warren, K. R., & Hewitt, B. G. (2010). Fetal alcohol spectrum disorders: From research to policy. *Alcohol Research & Health*, *33*(1-2), 118.

Whaley, S. E., O'Connor, M. J., & Gunderson, B. (2001). Comparison of the adaptive functioning of children prenatally exposed to alcohol to a non-exposed clinical sample. *Alcoholism: Clinical and Experimental Research, 25*(7), 1018-24.