

Social Development in Children with Foetal Alcohol Spectrum Disorders

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Foetal Alcohol Spectrum Disorders (FASD) develop when unborn children are exposed to alcohol prenatally. As a result of this exposure, children with FASD exhibit a range of social, behavioural, cognitive and even physical deficits that can impede their life-long development. These deficits can be influenced by maltreatment and the instability resulting from being placed into out-of-home care, and/or multiple foster-care placement breakdowns. The aim of this article is to increase awareness amongst child welfare professionals of how prenatal alcohol exposure impacts on children's social development. Social deficits include problems with social cognition and social information processing, which result in issues in social problem solving, processing social cues, social judgement, and developing and maintaining relationships. These deficits leave children with a FASD vulnerable to victimisation, exploitation, peer pressure and, as a result, interaction with the criminal justice system. Deficits are life-long and become more pronounced with age, although early detection and intervention appears to improve social skills deficits. Such interventions need to be explored further as they could potentially mitigate some of these deficits by capitalising on the neuroplasticity of a child's developing brain and pave a more positive trajectory for these children's future.

■ **Keywords:** FASD, PAE, social development, social information processing, social skills deficits

Alcohol is a toxin that can have significant adverse effects on a developing foetus (Streissguth, 1997). Prenatal alcohol exposure has been associated with a range of developmental deficits in children (Rasmussen, Becker, McLennan, Urichuk, & Andrew, 2010). Foetal alcohol spectrum disorder (FASD) is a term used to encompass a range of conditions related to prenatal alcohol exposure, including: foetal alcohol syndrome, partial foetal alcohol syndrome (FAS), alcohol-related neurodevelopmental disorder and more (Greenbaum, Stevens, Nash, Koren, & Rovet, 2009; Rasmussen et al., 2010). For simplicity, 'children with a FASD' will be used to refer to children who have been exposed to alcohol prenatally and attract any of the diagnoses that fall under the umbrella term 'FASD'. The aim of this article is to increase awareness amongst child welfare professionals of how prenatal alcohol exposure impacts on children's social development by briefly discussing key papers in this area of research. The methodological and diagnostic challenges around FASD are complex (e.g. it is challenging to detect FASDs in children when they do not have recognisable facial features of FAS and/or when their mother's prenatal alcohol consumption is unknown); however these will not be covered here. Please refer to National

Centre on Birth Defects and Developmental Disabilities and associates (2004) and Mattson, Crocker and Nguyen (2011) for a discussion of these challenges.

Risk of Child Maltreatment

Children with a FASD appear to experience a greater incidence of child abuse and neglect (Kully-Martens, Denys, Treit, Tamana, & Rasmussen, 2012; Smith, Johnson, Pears, Fisher, & DeGarmo, 2007; Streissguth, Barr, Hogan, & Bookstein, 1996). Conry, Fast and Loock (1997) found that 73.1 per cent of youth with a FASD had experienced emotional, physical and/or sexual abuse. Similarly, Greenbaum and colleagues (2009) found that 73 per cent of children with a FASD had experienced neglect or abuse in some form compared to 3 per cent of comparison groups of 'typically developing children' and 'children with attention deficit hyperactivity disorder (ADHD)'.

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Out-of-Home Care

Prenatal alcohol exposure is a highly significant issue for children in contact with child welfare/protective services. Children with a FASD can often be placed in out-of-home care due to ongoing issues of alcohol consumption within their families of origin. In South Australia, parental substance misuse is a contributing factor in approximately 70 per cent of cases of children entering out-of-home care, with alcohol being the most commonly used substance (Jeffreys, Hirte, Rogers, & Wilson, 2009). The trauma of being removed from their family to be placed into out-of-home care and the addition of potential instability from multiple foster-care placement breakdowns can further compound the negative influence of the deficits exhibited by children with a FASD.

Caregiver Burden

Children with a FASD who are in out-of-home care can suffer multiple placement breakdowns as a result of their complex support needs and challenging behaviour (Paley & Auerbach, 2010). Insufficient information about the extent of disability in children with a FASD and parenting stress have both been found to increase the chance of foster care placement breakdown (Brown, Bednar, & Sigvaldason, 2007). They are also more likely to be exposed to complex family backgrounds and stressful interpersonal relationships prior to entering foster care that can combine to make it difficult for foster carers to support them (Wilkins, Jones, Watkins, Mutch, & Bower, 2013). This could be particularly detrimental to children with a FASD as placement stability and a stable, nurturing environment are strong predictors of improved behaviour and cognitive functioning (Green, 2007; Kalberg & Buckley, 2007), as well as more positive long-term outcomes (Streissguth, Bookstein, Barr, Sampson, O'Malley, & Young, 2004). However, such stability may not be experienced by many.

Social Competence

Notwithstanding the range of factors affecting children entering care, the impaired social development of children with a FASD can have a significant negative impact on their lives. The nature and extent of social difficulties experienced by children with prenatal alcohol exposure is concerning. Children with a FASD experience extensive difficulty with many aspects of social relationships, including:

- Poor social skills/social competence.
- Difficulty forming interpersonal relationships.
- Social relationship problems.
- Display socially inappropriate behaviours.
- Poor social judgement.
- Difficulty perceiving and responding to social cues.
- Externalising behaviour problems.

- Difficulty exhibiting consideration for others.

(Greenbaum et al., 2009; Kodituwakka, Segall, & Beatty, 2011; Kully-Martens et al., 2012; Mattson & Riley, 2000; Rasmussen et al., 2010; Streissguth, Aase, Clarren, Rannels, LaDue, & Smith, 1991)

Caregivers (including biological, foster, adoptive, and other) indicate children with a FASD have greater deficits in social responsibility and social skills, higher levels of hyperactivity (e.g. impulsivity, restless) and more internalising problems (e.g. anxiety, poor self-esteem) than children without prenatal alcohol exposure (Rasmussen et al., 2010). In the same study, respite workers also classified children with a FASD as hyperactive. These issues can be difficult for caregivers to manage.

Amongst the deficits documented in children with prenatal alcohol exposure are profound problems in processing social cues and managing their social relationships (Kully-Martens et al., 2012; Rasmussen et al., 2010; Streissguth et al., 1991). Numerous studies have found that children with a FASD present with deficits in social cognition and social information processing (Dodge et al., 2003; Greenbaum et al., 2009; Kully-Martens et al., 2012; McGee, Bjorkquist, Price, Mattson, & Riley, 2009). Deficits in social information processing contribute to the interpersonal, behavioural and emotional issues often exhibited by children with a FASD (Dodge et al., 2003; Kully-Martens et al., 2012).

Compared with typically developing children or to children with ADHD, children with a FASD have been found to have weaker social cognition and facial emotion processing ability (Greenbaum et al., 2009). Difficulties with social cognition appear to be predictive of children's behaviour problems. Kodituwakka, Segall and Beatty (2011) concluded that the behavioural and adaptive problems of children with a FASD are not only related to their poor intellectual functioning, but also to poor executive functioning (e.g. planning, attention, verbal reasoning) and slowed overall processing of information, including social information. Social problem solving is also affected by social information processing (McGee et al., 2009). Problem solving deficits can leave children with a FASD vulnerable to forming friendships with delinquent peers, victimisation, exploitation, peer pressure and, as a result, interaction with the criminal justice system (Fast & Conry, 2009; Paley & Auerbach, 2010).

These deficits in social competence have been found to become more severe with age (Kully-Martens et al., 2012; Thomas, Kelly, Mattson, & Riley, 1998; Whaley, O'Connor, & Gunderson, 2001). They may also be profound. Streissguth and colleagues (1991) found that the social functioning of some adults with a FASD was equivalent to the developmental level of a typically developing six-year-old.

Cognitive processes appear to be closely associated with the deficient social skills and socially inappropriate behaviours of these children (Greenbaum et al., 2009;

Kodituwakku et al., 2011; Kully-Martens et al., 2012). A recent review of the neuropsychological profiles of children with prenatal alcohol exposure outlined a spectrum of issues that could contribute to their social difficulties, including problems with verbal and non-verbal learning, spatial processing, attention and motor difficulties (Kodituwakku et al., 2011).

In addition, the social difficulties experienced by children with a FASD are underpinned by cognitive impairments that are qualitatively different to those exhibited by children with ADHD or other difficulties (Mattson et al., 2011). For example, children with a FASD have more difficulty in encoding (forming memories), rather than retrieving verbally mediated learning (Crocker Vaurio, Riley, & Mattson, 2011). They have more difficulty with flexible problem solving, and in shifting attention from task to task (Coles et al., 1997), rather than in focusing and sustaining attention. There appear to be specific deficits in the processing of facial emotions (Greenbaum et al., 2009). They also demonstrate impairment in adaptive, communicative and daily living skills that children with ADHD do not demonstrate (Crocker et al., 2011). Greenbaum and colleagues (2009) conclude the unique difficulties with social cognition and in the processing of emotional cues shown by children with a FASD may be central to their social difficulties. Research into the relationship between cognitive difficulties and social difficulties is ongoing (see Kodituwakku & Kodituwakku, 2011).

Early Detection and Intervention

A critical question or concern for professionals and carers who support children with a FASD is whether or not these social difficulties can be ameliorated through specialised intervention. The neural plasticity of a child's developing brain (Johnston, Ishida, Ishida, Matushita, Nishimura, & Tsuji, 2009; Paley & Auerbach, 2010) may provide opportunity for children to learn the appropriate skills and behaviours to mitigate the above-mentioned deficits. Thus, early detection and intervention could provide the opportunity to improve these social skills deficits (Kodituwakku et al., 2011; Kully-Martens et al., 2012). However, very little research has been conducted on the effectiveness of such interventions amongst this population.

Only one social skills intervention, conducted with 100 children with prenatal alcohol exposure between the ages of six and 12 years, was found (Keil, Paley, Frankel, & O'Connor, 2010; Kully-Martens et al., 2012; O'Connor et al., 2006). This intervention was based on the parent-assisted Children's Friendship Training procedure (Frankel, 2005; Frankel & Myatt, 2003) and used instruction, modelling, rehearsal, performance feedback, homework assignments and parent-led coaching during social play to improve social competence (O'Connor et al., 2006). Separate concurrent sessions about the key social skills the children were being taught were also conducted with parents. When compared

to the delayed treatment control group, children who received the training had significantly improved knowledge of appropriate social skills, improved social skills (parent-report), and decreased problem behaviours (parent-report). A three-month follow-up found that these results had been maintained. No treatment effects were found in teacher-reported social skills and problem behaviours; however, a shift towards improvement could be seen at the three-month follow-up.

The effectiveness of social skills interventions with both typically developing children (Hennessey, 2007) and children with Asperger's syndrome (Beaumont & Sofronoff, 2008) suggest that such interventions could be effective in improving social skills deficits in children with a FASD. Some think that long-term, comprehensive social skills interventions may be effective in improving the social skills and behaviours of children with a FASD (Kully-Martens et al., 2012). Further research on the effectiveness of specific interventions in improving the social skills of children with a FASD conducted within schools or other community programmes is needed.

Conclusion

Children placed in care are likely to have experienced, or will experience, many issues in life such as poor nutrition, parental attachment and physical and/or emotional health, amongst others. However, prenatal alcohol exposure is one significant burden that can compound the impact of the difficulties faced. Children with a FASD can exhibit numerous social, behavioural, cognitive and even physical deficits that can impede their life-long development. This article explored how the social development of children is influenced by prenatal alcohol exposure to raise awareness of this issue among child welfare professionals. Social deficits are a big issue for the child welfare and child protection sector as they can lead to children having difficulty negotiating important social relationships, multiple foster-care placement breakdowns and can place the child at a higher risk for abuse or neglect. Children's social development can be drastically influenced by such exposure. Further investigation is required into the effectiveness of social skills interventions amongst children with FASD placed in foster-care. These could potentially mitigate some deficits by capitalising on the neuroplasticity of a child's developing brain and pave a more positive future trajectory for these children.

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