Although FAS and associated disorders were first described in 1973 (Jones & Smith), only recently has attention been paid to finding effective methods for intervention with affected children. The Institute of Medicine (IOM) noted in 1996 (Stratton et al.) that there was a great need for clinical intervention services, but it was only through the advocacy of parents and caregivers and the allocation of funds by Congress to the Public Health Service that there has been significant attention to these issues. A recent review of the literature in this area (Premji, Benzies, Serrett, et al. 2007) noted that there were only 10 articles on interventions for FASD and of these, only 3 could be described as “empirical”, that is to say, evidenced based. Since studies that are not evidence based cannot be used to develop services in schools and other public agencies and are not supported by most insurance companies, this lack of information has contributed to the difficulties in obtaining appropriate services for alcohol-affected children.

In the last year or so, several studies have been published about interventions targeted at children with FASD. Some of these were the result of the initiative by the Centers for Disease Control and Prevention (CDC) that funded five sites in different parts of the United States (Bertrand, et al, 2008, in process) to examine treatments for “core” deficits found in FASD. Several others were sponsored by the National Institute on Alcoholism and Alcohol Abuse (NIAAA). One (Adnams, et al, 2007) was carried out in a South African School environment and two others involved using computer games to teach safety skills (Coles, et al, 2007; Padgett, Strickland, Coles, 2006).
Interventions for alcohol-affected children:

As anyone who has lived or worked with a child with FASD knows well, there are many different problem areas that could benefit from treatment. Current intervention programs have focused only on one or two areas because resources have been limited in both money and time. To demonstrate the evidence of program effectiveness that is required for a program to be recognized and adopted by educational and clinical system, interventions must be targeted. In addition, different interventions are necessary at different ages. For these reasons, the programs described here are all different and focus on different aspects of FASD. Nevertheless, there are some common themes and it is evident that appropriate interventions do work for children with FASD. Here are examples of cognitive interventions for children with FASD:

School-based Language and Literacy Training (LLT): (Adnams, et al, 2007). This South African study addressed cognition, academic achievement, and behavior among children with FASD. Third grade children with and without FASD were compared in their response to an educational intervention. The intervention was done in the classroom twice a week by a speech and language therapist with half of the time spent on phonological awareness and half on language therapy. Treated children with FASD showed improvement specific to LLT with no effects seen on overall scholastic achievement (e.g., math outcomes). The authors suggest that methods developed for remediation with other groups of learning disabled children can be applied effectively to those with FASD. Attempts to involve birth parents in this intervention were not as effective as anticipated probably due to poverty and limited family resources.
Math Interactive Learning Experience (MILE): (Kable, et al, 2007; Coles, et al, in review). This program addressed math performance and behavior regulation. Many children with FASD have specific deficits in math and the visual/spatial and executive function skills that support math. The MILE program addresses these problems through parent training, individualized educational intervention, and modifying arousal regulation to improve behavior and math functioning in children ages 3 to 10. In addition to providing specialized one-on-one instruction to children, parents were empowered through education on the neurodevelopmental impact of FASD, methods for interacting with educational and social systems, and behavioral management techniques. At follow-up, children showed fewer behavior problems and had significantly gains in math achievement. At a 6-month follow-up, improvements in both areas were maintained and teachers reported significantly better behavior at school.

“Games that Work”, Using computer games to teach alcohol-affected children about safety: (Coles, et al, 2007; Padgett, et al, 2006) Children with FASD are at higher risk for unintentional injuries, a leading cause of death and disability in this age group. Learning safety skills is difficult because of the need to tailor the instruction to the specific needs of the child and to persist until the skill is mastered. In this project, children, ages 4-10, learned fire and street safety through computer games that used “virtual worlds”. The game format addresses children’s skill learning deficits by allowing repeated, consistent practice, clear on-screen guidance (provided by a cartoon dog named, “Buddy”), safe learning situations, control of input stimuli and complexity to help with appropriate task focus, and strong engagement value provided by the game format. To compensate for learning problems, the programs emphasized language-based
instruction and simplified of visual/motor and visual/spatial aspects. Following game play, children showed significant improvement in verbal knowledge of safety skills that also generalized to actions in the real-world environment and was retained over a week’s follow-up.

Conclusions

These interventions demonstrate that, in the right circumstances, children with FASD can respond well and demonstrate significant improvements in development and behavior. Because there are other situations in which their response is not so positive, it is important to understand what elements are important to the success of treatment. In the past, it has been suggested that alcohol and drug-exposed children are particularly resistant to treatment, perhaps because “brain-damage” resulting from their exposure makes them unable to learn or change or react in ways that other children can. This suggestion is often made either to deny children services or to excuse a lack of effort to improve outcomes. Happily, the studies mentioned in this article directly refute this idea and may help avoid such negative thinking in the future.

Nevertheless, history suggests that the needs of children with FASD cannot always be met through the “usual and customary” methods. While children with FASD often respond like other children, prenatal exposure does lead to particular patterns of neurodevelopment and is associated more often with certain kinds of life experiences. Understanding these patterns allows greater efficiency in designing effective interventions for this group. All of the interventions used methods first developed for other groups of children, including those with learning disabilities, psychiatric disorders and behavior problems. When these methods were adapted to accommodate the
neurodevelopmental characteristics associated with prenatal exposure as well as the impact of postnatal environment, children were able to benefit significantly. The appearance of these intervention studies should empower parents and professionals to continue to advocate for early identification and appropriate education and treatment for children affected by alcohol.

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References and Further Reading


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