

**Findings from the FASCETS Oregon Fetal Alcohol Project:
Efficacy of a neurobehavioral construct: interventions for children and adolescents with
Fetal Alcohol Spectrum Disorders (FASD)**

Abstract:

Background: This three year preliminary study was funded by the State of Oregon Department of Human Services to explore the efficacy of interventions for children and adolescents with FASD. It was implemented as a multisystems community-based collaborative project.

Goals: To explore the effectiveness of a research-informed, theoretically grounded approach that specifically recognizes and addresses neurocognitive issues related to FASD at home, school and in the community.

Hypothesis: If FASD is a neurocognitive disorder with presenting behavioral symptoms, then providing information and developing and implementing techniques based on a neurobehavioral perspective in all environments will: in children 1) Reduce secondary behavioral symptoms, and in adults will 2) Reduce stress and 3) Increase a sense of personal competency.

Methods: 19 children ages 3-14 with FASD in foster care generated nineteen parent-professional teams of adults who lived or worked with these children. Team size ranged from 3-12. Teams were provided with education and support for developing and implementing neurobehaviorally-based techniques over a three-year period. Child-specific interventions were implemented at home, school and in the community. Annual evaluations were conducted.

Evaluation: Annual written evaluations for all participants and structured interviews with select teams.

Results: At the end of the three year project, statistical significance was found for all but one subvariable (anxiety) analyzed for this study (paired t-tests, $p < .05$). In children and adolescents, seventeen of eighteen secondary behavioral characteristics, and in parents and professionals, both reduced levels of stress and improved sense of personal efficacy. Interestingly, findings of improvements in primary behavior variables were not expected since these reflect physiological status, yet 51% of these achieved significance. Improvements were noted in nearly all areas, particularly in school settings, although analyses of these were defined as outside the scope of this study. Impressions from the research process and through structured interviews were that as adults understood children differently, their relationships changed. Even though primary behaviors did not change, these appeared to be experienced as less challenging.

Conclusions and recommendations: These findings suggest that a neurobehavioral approach implemented as part of a community-based collaborative design has potential. Development and application of accommodations for those with FASD and creating a “goodness of fit” across environments appears to contribute to improvements in children and adults and in their relationships. The current dearth of research-based theoretically grounded interventive studies and the potential viability of this model suggest the need for further exploration of this construct.

Key words: Fetal Alcohol Syndrome, Alcohol-Related Neurodevelopmental Disorder, Neurobehavioral disability, Fetal Alcohol Spectrum Disorders, environmental accommodations, interventions

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