Prenatal dangers

Prenatal Cocaine Exposure: Potential Dangers This report addresses a recent research study, conducted by Arendt & Farkas et al, d the " Cognitive Outcomes of Preschool Children With Prenatal Cocaine Exposure." This research study was published in 2004, and its stated goal was an attempt to clarify and to reconcile conflicting data regarding the effects of fetal brain exposure to cocaine on subsequent cognitive development. The findings of this research study illuminate the very real dangers of drug use in the prenatal context.

The specific purpose of this study was to " assess effects of prenatal cocaine exposure and quality of caregiving environment on 4-year cognitive outcomes" (Arendt & Farkas et al, 2004: p. 2448). The study was conducted by doctors at an urban teaching hospital and the research subjects included three hundred and seventy-six pre-school children. Of these children, one hundred and ninety experienced fetal brain exposures to cocaine and one hundred and eight-six did not experience such exposure. The main testing standards were related to intellectual quotient measurements; more specifically, the study employed the Wechsler Preschool and Primary Scales of Intelligence-Revised measurements for determinations of outcomes. The findings were rather interesting.

As an initial matter, this study was pursued because of inconsistent results regarding the longer-term consequences of prenatal cocaine exposure. The findings in this case, dealing only with the effects noticed in a child's initial four-year lifespan, were seemingly mild in certain ways. In many respects, the study found that fetal brain exposure to cocaine did not cause a lower full-scale intelligence quotient, did not cause lower scores or verbal performance generally, and did not cause any significant differences in

performance. On the other hand, there were some findings which suggested that the potential dangers of prenatal drug exposure, in this case cocaine, were real. For instance, " prenatal cocaine exposure was related to small but significant deficits on several subscales" (Arendt & Farkas et al, 2004: p. 2452). The specific findings were that fetal brain exposure to cocaine resulted in significant deficits in visual-spatial skills, general knowledge, and arithmetic skills. An additional finding was that while overall performance was generally similar, those children whom were exposed to cocaine demonstrated a lower likelihood of posting an intelligence quotient score above the normative means.

This study offers some interesting insight into the precise effects of prenatal drug exposure in the short-term, and some concrete bases for speculation into the longer-term effects. From a general point of view, there do not appear to be any substantial effects. Verbal skills and overall performance were basically the same for both exposed and non-exposed children. These findings, however, may be misleading because there were demonstrable negative cognitive effects on a more particularized level. The study clearly showed, for example, that specific types of cognitive development, such as arithmetic and spatial-visual skills, were impaired. The implication is that these children will experience even more substantial intellectual problems as they continue to develop cognitively. In short, fetal brain exposure to cocaine places infants at a cognitive disadvantage. Specific cognitive impairments will likely affect cognitive development more generally as these children mature.

These findings, and a reasonable interpretation of these findings, suggest that, in fact, there are potential dangers arising from the use of drugs in

respect to prenatal contexts. It is true that the data is not entirely consistent, and that cognitive functions seem to be affected in different ways, but the end result is that there is a demonstrable relationship between drug use and certain aspects of subsequent cognitive development. This is consistent with the text studied in class, although the studies do demonstrate that more research is needed.

Works Cited

Arendt, R., Farkas, K., Klein, N., et al. " Cognitive Outcomes of Preschool Children With

Prenatal Cocaine Exposure." Journal of the American Medical Association, JAMA. 2004; 291: 2448-2456.