

Research In Brief

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Predictors of the Psychosocial Adjustment of Children Living in Households of Parents in which Fathers Abuse Drugs: The Effects of Postnatal Parental Exposure

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Although alcohol and other drugs can have serious physical, emotional, behavioral, economic, and social consequences for adults who regularly misuse them, children who live with alcoholic or drug-abusing parents can also fall victim to harmful familial environments.

The purpose of this study was to examine factors associated with the psychosocial adjustments of children living in households of parents in which fathers were entering treatment for substance abuse. Mothers did not meet criteria for a psychoactive substance use disorder for alcohol or other drugs and based on reports by parents, none of the children were exposed prenatally to illicit drugs.

Findings

- Children living with drug-abusing fathers had high levels of psychosocial maladjustment; over 40 percent of the children sampled had a clinically significant elevation on a common measure of child adjustment.
- Characteristics found to predict higher levels of children's maladjustment in these families that had a male entering substance abuse treatment: younger parents, partnered in shorter relationships, lower household income, more frequent father-to-mother physical aggression, more frequent substance use by the father during the previous year, the presence of antisocial personality disorder in fathers, and higher levels of psychological distress in mothers.

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The Perceptions of Infant Distress Signals Varying in Pitch by Cocaine-using Mothers

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The purpose of this study was to explore the responses of mothers -- who had used cocaine during pregnancy -- to distress signals from their infants. In particular, how do these mothers perceive, and choose to respond to, infant cry sounds that vary in fundamental frequency (basic pitch)?

The findings of this study provide important evidence of both similarities and differences between women who used cocaine during pregnancy and women who had not used cocaine in their perceptions of infants' behavioral cues.

Findings

- Both groups of mothers rated cries with a higher fundamental frequency as more arousing, aversive, urgent, and sick sounding.
- The highest pitched cries received the highest ratings for caregiving interventions.
- Mothers who had used cocaine (a) rated cries as less arousing, aversive, urgent, and sick-sounding; (b) indicated they were less likely to pick up or feed the infant; and (c) indicated they were more likely to give the crying infant a pacifier or just "wait and see."
- Mothers who had used cocaine perceived cries to be less salient and less likely to elicit nurturing, caregiving responses than mothers in the comparison group. These findings suggest that maternal cocaine use may be associated with altered perceptions of infant distress signals that may provide the basis for different responsiveness in caregiving.
- One possible explanation for the differences may be based on different experiential histories of the two groups of mothers. The mothers who had used cocaine prenatally were older and had

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Predictors of the Psychosocial Adjustment of Children (cont'd)

The Study

- Participants were 112 heterosexual couples in which male partners were entering drug abuse treatment. Men met abuse or dependence criteria for at least one psychoactive substance use disorder, had a psychoactive substance other than alcohol as their primary drug of abuse, and had medical clearance to engage in outpatient treatment.
- Female partners did not meet criteria for a psychoactive substance use disorder in the previous six months. Both partners reported that the mother had not used illicit drugs or abused alcohol during pregnancy with the child targeted for the study.
- Mothers and fathers rated their children using the *Pediatric Symptom Checklist* (PSC; Jellinek & Murphy, 1990). The PSC assesses children's psychosocial functioning; higher scores are indicative of increased child impairment.
- The *Dyadic Adjustment Scale* (DAS; Spanier, 1989) was used to measure general relationship satisfaction. The *Conflict Tactics Scale* (CTS; Straus, 1990) was used to measure partner violence.
- Frequency of drug and alcohol use was assessed with the *Timeline Followback Interview* (TLFB; Fals-Stewart, O'Farrell, Freitas, McFarlin, & Rutigliano, 2000; Sobell & Sobell, 1996). The TLFB uses a calendar and other memory aids to gather retrospective estimates of an individual's substance use frequency over a specified time period.
- Mothers' and fathers' psychological functioning was assessed using the *Brief Symptom Inventory* (BSI; Derogatis, 1992). Fathers were interviewed with the *Structured Clinical Interview for DSM-III-R* (SCID; Spitzer, Williams, Gibbon, & First, 1990) for the presence of a current diagnosis of antisocial personality disorder.

Study Particulars

- Couples in the study were predominantly white, in their mid-30s, high-school-educated, married or cohabiting for approximately eight years, and had two children. Although most of the male partners reported that their primary drug of abuse was cocaine, most of the patients (87 percent) met abuse or dependence criteria for two or more psychoactive substances. Furthermore, 71 percent of the patients met *DSM-II-R* criteria for either alcohol abuse or dependence.
- Partners reported their relationships were moderately to severely distressed and 67 percent of the couples reporting at least one act of physical aggression between them during the year before treatment. On average, both partners reported moderate levels of psychological distress.
- The children, who were roughly 11 years old and in the sixth grade, had relatively high PSC scores. Previous research has shown that "normal" children obtained an average score of 15.1; children in this study averaged a score of 26.2. Forty-two percent of the children had PSC scores over the clinical cutoff of 28, suggestive of significant psychosocial impairment.

Discussion

Children in the sample had postnatal social exposure to drug abuse by fathers living in their homes, but were not prenatally exposed to drugs. However, they were exposed to other important risk factors known to compromise child development. In particular, the families generally had low incomes, low levels of relationship satisfaction between parents and high frequency of reported partner physical violence. Fathers reported relatively frequent use of psychoactive substances prior to treatment, with a significant minority also meeting criteria for antisocial personality disorder. Not surprisingly, the children had clinically elevated PSC scores suggestive of psychosocial maladjustment.

Clinical Implications

- Identification of factors associated with poorer psychosocial adjustment of these children (e.g. marital aggression, severity of parental substance abuse) can be used in improving intervention and prevention strategies.
- Given that 40 percent of the children sampled had a clinically significant elevation on a common measure of child adjustment, clinicians working in traditional settings should consider offering parenting- and/or child-related services.

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The Perceptions of Infant Distress Signals (cont'd)

more children than the other mothers. Perhaps older mothers with more childrearing experience find infant crying to be generally less arousing. They may feel more comfortable with giving an infant in distress time to calm itself before intervening.

Study Methods

- Responses to infant distress signals were studied in 16 mothers who had used cocaine during pregnancy and 15 mothers who had not. The mothers ranged in age from 19 to 43 years, were mostly African American (90 percent), receiving Aid to Families with Dependent Children (55 percent), and were single (68 percent). All mothers were the primary caregivers for their infants and had daily contact with them.
- Cocaine use during pregnancy was determined by a combination of maternal report and chart review. Urine toxicologies from the prenatal or immediate postpartum period were available through chart review for all mothers in the study. Mothers were included in the cocaine group if self-reports were positive, regardless of urine toxicology results. Mothers who reported that they did not use cocaine during pregnancy, but had positive urine toxicology results following delivery, also were included in the cocaine group.
- The cry stimuli were generated from the tape-recorded cry of a two-day-old female infant before the infant's scheduled feeding. The frequency of the original cry was then digitally altered by 100 Hz and then by 200 Hz for a total of three cries. Each of these three cries was rated 16 times, for a total of 48 ratings.
- Cries were rated on four perceptual items: arousing, aversive, urgent and sick as well as on six caregiving items: clean, cuddle, feed, give pacifier, pick up, and wait and see. All items have been used in previous studies.

Discussion

- Mothers who had used cocaine prenatally and mothers who had not used cocaine were similarly affected by relatively small increases in fundamental frequency of the cry sound, such that cries with higher pitches were rated as more arousing, urgent, aversive, and sick-sounding. The findings of this study suggest that both cocaine-using and comparison mothers find the basic pitch to be a salient feature of infant crying.
- Mothers who had used cocaine prenatally perceived cries to be less arousing, urgent, aversive, and sick sounding than the other mothers. They also gave lower ratings on the caregiving response choices "pick up" and "feed the infant" and higher ratings to the response choices "giving a pacifier" and "wait and see." Taken together, ratings of the perceptual responses and caregiving choices suggest that mothers who had previously used cocaine find infant cries to be less salient than mothers who have not used cocaine and to elicit generally less active, nurturing responses.

- Independent of the previous points, mothers who had used cocaine indicated that the behaviors they were more likely to make were those that require lower levels of personal investment and social engagement. In addition, they were less likely to engage in some behaviors that involved active interaction with their infant such as "picking up" and "feeding the infant." A reduction in such basic empathic responses may reflect the mothers' (who had used cocaine) reduced ability or willingness to invest emotionally in interactions with her infant.

The Last Word

The results of this study should be viewed within the context of how the social environment contributes to the developmental course of the cocaine-exposed infant. Although work continues to show the adverse effects of cocaine exposure, polydrug exposure, or both on early neurobehavioral development (e.g., Coles et al., 1992; Lester et al., 1991), the developmental course of the infant may continue to be adversely affected by a less-engaged caregiving environment.

It should be emphasized that the findings of this study do not necessarily indicate that mothers who had used cocaine are "bad" parents, nor should it provide support for decisions that infants should be taken away from them as a class action. The results indicate that these mothers are at high risk for a perceptual set that may contribute to the infant's high-risk developmental course.

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