

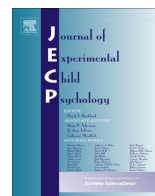


ELSEVIER

Contents lists available at ScienceDirect

Journal of Experimental Child Psychology

journal homepage: www.elsevier.com/locate/jecp



CrossMark

Prenatal substance exposure and child self-regulation: Pathways to risk and protection

Rina D. Eiden^{a,*}, Stephanie Godleski^a, Pamela Schuetz^b, Craig R. Colder^c

^a Research Institute on Addictions, State University of New York at Buffalo, Buffalo, NY 14203, USA

^b Department of Psychology, Buffalo State College, Buffalo, NY 14222, USA

^c Department of Psychology, State University of New York at Buffalo, Buffalo, NY 14260, USA

ARTICLE INFO

Article history:

Received 16 December 2014

Keywords:

Self-regulation

Harsh parenting

Autonomic

Prenatal substance exposure

Language development

Effortful control

Conscience

ABSTRACT

A conceptual model of the association between prenatal cocaine exposure (PCE) and child self-regulation via maternal harshness and language development was examined. Specifically, the model tested whether PCE was associated with self-regulation either directly or indirectly via high maternal harshness and poor language development. The role of child sex, autonomic reactivity, and cumulative environmental risk as potential moderators was also explored. The sample was 216 mother–child dyads recruited at birth and assessed at 2, 7, 13, 24, 36, and 48 months of child ages. Participating mothers were primarily African American (72%). Results indicated a significant indirect association between PCE and child effortful control at 36 months via higher maternal harshness. Autonomic reactivity moderated the association between maternal harshness and self-regulation such that among children with poor autonomic reactivity, high maternal harshness was associated with lower conscience at 3 years. Child sex and environmental risk did not moderate the association between PCE and self-regulation. Thus, the quality of caregiving experience played a significant role in the development of self-regulation among PCE children, especially those at higher autonomic risk. In particular, PCE children who also exhibit poor autonomic reactivity may be particularly susceptible to environmental influences such as parenting.

© 2015 Elsevier Inc. All rights reserved.

* Corresponding author. Fax: +1 716 887 2510.

E-mail address: eyden@ria.buffalo.edu (R.D. Eiden).

Introduction

Although initial reports of highly impaired “crack babies” have not been borne out by systematic research on the effects of prenatal cocaine exposure (PCE), well-controlled prospective studies indicate significant effects of cocaine on the arousal/attention regulatory system (Lester & Padbury, 2009). Indeed, this is one of the most consistent findings in the cocaine literature across multiple stages of development ranging from the neonatal period to adolescence, including diverse methods such as parent reports, behavioral measures, and autonomic reactivity (e.g., Bendersky & Lewis, 1998; Carmody, Bennett, & Lewis, 2011; Coles, Bard, Platzman, & Lynch, 1999; Karmel & Gardner, 1996; Li et al., 2009; Schuetze & Eiden, 2006; Schuetze, Eiden, & Danielewicz, 2009). Recent brain imaging studies have indicated potential mechanisms explaining these associations such as reduction of amygdala response to emotional stimuli during a task demanding high cognitive load among control children but not among PCE children (Li et al., 2009) and lower ventral prefrontal cortex activation in response to increased cognitive load during this task among PCE children (Li et al., 2013). Animal models are supportive of this literature, indicating that prenatal exposure to cocaine results in alterations in attention and arousal regulation among offspring (Gendle et al., 2004) and increases susceptibility to stresses in the environment (Spear, Campbell, Snyder, Silveri, & Katovic, 1998). Thus, both the human and animal literatures suggest that PCE has the potential to significantly alter the regulatory system. However, few human studies of PCE have examined specific aspects of self-regulation such as effortful control (see Carmody et al., 2011, for an exception) and conscience or have included mediators or moderators of risk. The purpose of this study was to examine whether PCE was associated with two specific aspects of self-regulation, effortful control and conscience, either directly, or indirectly via high maternal harshness and poor language development. A second goal was to examine the role of child sex, autonomic reactivity, and cumulative environmental risk as potential moderators (see Fig. 1).

Self-regulation

As children enter the preschool period, they increasingly use effortful forms of regulation developed through interactions with the caregiving environment (Posner & Rothbart, 2007). Effortful control has been theorized to be an aspect of temperament, with roots in both biological processes (Posner & Rothbart, 2007) and the quality of parent–child interactions (Kim & Kochanska, 2012). It has been defined as actively suppressing a predominant response and performing a subdominant response given environmental demands. It is an aspect of self-regulation that emerges over the second and third years of life and denotes active processes of effortful or willful control of impulses (Rothbart & Ahadi, 1994), and it is an important dimension of self-regulation predictive of disruptive and anti-social behaviors during later years (Kooijmans, Scheres, & Oosterlaan, 2000; Rothbart, Posner, & Kieras, 2006).

Whereas effortful control represents the temperamental aspect of self-regulation (Eisenberg, Smith, & Spinrad, 2011), internalization of rules of conduct or development of conscience reflects

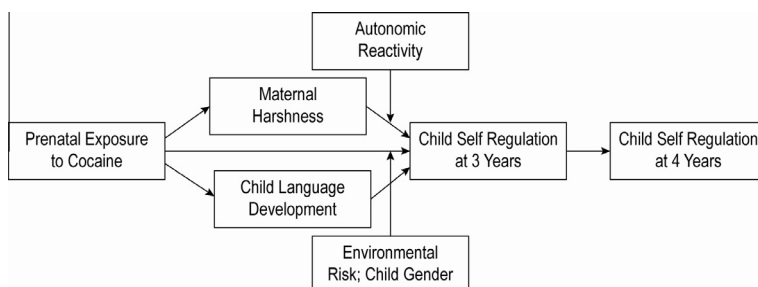


Fig. 1. Conceptual model.

Download English Version:

<https://daneshyari.com/en/article/7275004>

Download Persian Version:

<https://daneshyari.com/article/7275004>

[Daneshyari.com](https://daneshyari.com)