

**Journal of Pediatric Psychology Advance Access originally published online on March 23, 2005**

Journal of Pediatric Psychology 2006 31(1):15-26; doi:10.1093/jpepsy/jsj022

© The Author 2005. Published by Oxford University Press on behalf of the Society of Pediatric Psychology. All rights reserved. For permissions, please e-mail: [journals.permissions@oupjournals.org](mailto:journals.permissions@oupjournals.org)

# The Association Between Maternal Cocaine Use During Pregnancy and Physiological Regulation in 4- to 8-Week-Old Infants: An Examination of Possible Mediators and Moderators

Pamela Schuetze, PhD<sup>1</sup> and Rina D. Eiden, PhD<sup>2</sup>

<sup>1</sup> Department of Psychology, State University of New York College at Buffalo, and Research Institute on Addictions and Department of Pediatrics, State University of New York at Buffalo, and <sup>2</sup> Research Institute on Addictions and Department of Pediatrics, State University of New York at Buffalo

All correspondence concerning this article should be addressed to Pamela Schuetze, Department of Psychology, SUNY College at Buffalo, 1300 Elmwood Avenue, Buffalo, New York 14222-1095. E-mail: [schuetp@buffalostate.edu](mailto:schuetp@buffalostate.edu).

**Objective** To examine the association between maternal cocaine use during pregnancy and physiological measures of regulation, which included heart rate (HR) and respiratory sinus arrhythmia (RSA). **Methods** Potential mediators and moderators of this association were explored. Participants were 141 mother–infant dyads (77 cocaine exposed and 64 nonexposed) recruited at birth. Average infant HR and RSA was assessed at 4–8 weeks of age during a 15 minute period of sleep. **Results** Results indicated a dose-dependent effect of prenatal exposure to cocaine on RSA. There was no evidence that fetal growth or other prenatal exposure to substances mediated this association or that fetal growth or maternal age moderated this association. Regression analyses also indicated that birth weight (BW), but not birthlength (BL), head circumference (HC) or other substance use, mediated the association between prenatal exposure to cocaine and heart rate. **Conclusions** These results suggest that cocaine exposure is associated with physiological regulation at 4–8 weeks of age and highlight the importance of considering level of exposure when assessing infant outcomes.

**Key words:** heart rate; prenatal cocaine exposure; regulation; respiratory sinus arrhythmia.

## This Article

- ▶ [Full Text](#) **FREE**
- ▶ [FREE Full Text \(PDF\)](#) **FREE**
- ▶ CME/CE:  
Take the course for this article:  
[The Association Between Maternal Coca...](#)
- ▶ All Versions of this Article:  
31/1/15 *most recent*  
[jsj022v1](#)
- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

## Services

- ▶ [Email this article to a friend](#)
- ▶ [Similar articles in this journal](#)
- ▶ [Similar articles in ISI Web of Science](#)
- ▶ [Similar articles in PubMed](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Add to My Personal Archive](#)
- ▶ [Download to citation manager](#)
- ▶ Search for citing articles in:  
[ISI Web of Science \(4\)](#)
- ▶ [Request Permissions](#)
- ▶ [Disclaimer](#)

## Google Scholar

- ▶ [Articles by Schuetze, P.](#)
- ▶ [Articles by Eiden, R. D.](#)
- ▶ [Search for Related Content](#)

## PubMed

- ▶ [PubMed Citation](#)
- ▶ [Articles by Schuetze, P.](#)
- ▶ [Articles by Eiden, R. D.](#)

## Social Bookmarking



[What's this?](#)

---

Disclaimer:

Please note that abstracts for content published before 1996 were created through digital scanning and may therefore not exactly replicate the text of the original print issues. All efforts have been made to ensure accuracy, but the Publisher will not be held responsible for any remaining inaccuracies. If you require any further clarification, please contact our [Customer Services Department](#).

Online ISSN 1465-735X - Print ISSN 0146-8693

Copyright © 2008 [Society of Pediatric Psychology](#)



[Site Map](#) [Privacy Policy](#) [Frequently Asked Questions](#)

Other Oxford University Press sites:

 