The Association between Child Abuse Potential during Pregnancy and Post-partum Parental Responsivity and Harsh Parenting

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INTRODUCTION

Child abuse is a serious and pervasive problem in the United States. 3.3 million cases of suspected child abuse were reported in 2010 alone (U.S. Department of Health and Human Services, 2011). Given the prevalence of abuse, it is critical that risk of child abuse be identified at its earliest stage, perhaps prenatally. Furthermore, child abuse potential itself is predictive of negative child outcomes. Rodriguez (2003) found that high levels of child abuse potential were associated with greater anxiety and depression symptoms in children, regardless of actual parental abuse. Therefore, it is important to understand the role of child abuse potential in the mother-child relationship, as it may influence certain variables related to poor child outcomes. These variables include:

- **Low maternal responsivity**, or the level of appropriate response to the needs of one's child, predicts the development of insecure attachment styles and influences cognitive abilities, such as language development (Kochanska & Coy, 2003; Tamis-LeMonda, Bornstein, & Baumwell, 2001). Maternal emotional distress is associated with low maternal responsivity, while a mother's ability to take the perspective of her child predicts higher levels of responsivity (Gondoli & Silverberg, 1997).
- **Harsh parenting styles**, including physical discipline, criticism, and hostility, influence a child's emotional and social wellbeing. In particular, harsh and insensitive parenting predicts maladjusted social information processing, which can manifest in increased child aggression (Weiss, Dodge, Bates, & Pettit, 1992). Researchers have also found that harsh parenting predicts child and adolescent depression (Bender, Allen, McElhaney, Antonishak, Moore et al., 2007). One predictor of harsh parenting is maternal psychological health. For example, mothers with high intensity of negative emotion and low predictability of emotion typically display more harsh parenting (Lorber & Slep, 2005).
- **Knowledge of infant development** is also associated with child abuse risk among adolescent mothers (Dukewich, Borkowski, & Whitman, 1996). Mothers who have high knowledge of infant development and those who were less likely to overestimate infant abilities display higher quality of mother-child interaction (Huang, O'Brien Caughy, Genevro, & Miller, 2005).

The purpose of this study is to assess the relationship between prenatal child abuse potential and observed parental responsivity and harsh parenting practices. We hypothesize that high prenatal child abuse potential will predict lower levels of maternal responsivity and higher levels of harsh parenting (low levels of child acceptance) at 1 year post-partum. To explore potential intervention pathways, we hypothesize that knowledge of infant development will either mediate or moderate the relationship between child abuse potential and maternal responsivity and harsh parenting practices.

METHOD

A community sample of pregnant women (***N* = 120**) was recruited from public locations as well as programs and agencies in southeast Michigan. During the third trimester of their pregnancy, and again at 1 year post-partum, participants completed questionnaires about their personal history, current and past relationships, psychosocial experiences, and general health at a home visit or in the research lab.

- Age: Mean = 26; Range = 18 – 42, *SD* = 5.7
- Monthly Income: Median = $1,500
- Family Status: Single Parents = 64%; First-Time Mothers = 30%
- See Figures 1 and 2 for other demographic characteristics

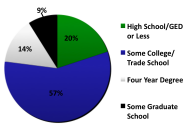
Measures

1) **Child abuse potential.** The Brief Child Abuse Potential Inventory (*B-CAP*; Ondersma et al., 2010) is a 33-item questionnaire that was **administered prenatally** to assess dimensions related to risk for child maltreatment such as personal distress, loneliness, feelings of persecution, and rigid thinking.

2) **Knowledge of Infant Development.** The Knowledge of Infant Development Inventory (KIDI; MacPhee, 1981) was **administered 1 year post-partum** to assess the participants' knowledge of the characteristics of typical infant development. The values used in this study are from the KIDI **total score**, which is the total number of items answered correctly divided by the total number of items (20), providing a proportion of correct responses.

3) **Responsivity and Harsh Parenting.** The infant/toddler version of the Home Observation for Measure of the Environment (HOME; Bradley, Caldwell, & Rock, 1988) was **administered 1 year post-partum** in order to asses dimensions related to parenting style. This measure includes 45 items and 6 subscales, two of which were Responsivity (11 items) and Acceptance (8 items). The majority of items on the measure are based on direct observation of the mother interacting with the child during the home visit. Lower scores on the Acceptance subscale indicate higher levels of harsh parenting. Examples of Responsivity items include *"Parent spontaneously praises the child at least twice"* and *"Parent's voice conveys positive feelings toward child."* Examples of Acceptance/Harsh Parenting items include *"Parent does not express overt annoyance with or hostility to the child"* and *"Parent neither slaps or spanks child during visit."*

Figure 1: Education Levels of Sample



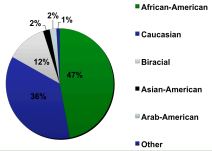


Figure 2: Racial Make-Up of Sample

RESULTS

Table 1. **Descriptive Data for Study Variables**

Measure	Mean	Standard Deviation	Minimum	Maximum	Possible Range	Alpha
BCAP	6.42	4.97	0	21	0 – 24	.86
KIDI	0.74	0.15	0.25	1	0 – 1	.55
Responsivity	9.01	1.85	4	11	0 – 11	.64
Acceptance	5.92	1.56	1	8	0 – 8	.56

Table 2. **Correlation Matrix for Study Variables**

	BCAP	KIDI	Responsivity	Acceptance
BCAP	1			
KIDI	-.199*	1		
Responsivity	-.228*	.140	1	
Acceptance	-.246**	.474***	.280**	1

* $p < .05$. ** $p < .01$. *** $p < .001$.

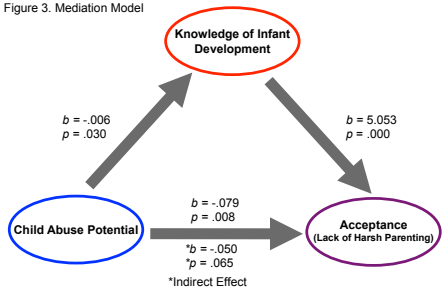
Prenatal Child Abuse Potential and Parenting at Age 1

All correlations can be found in Table 2. A significant, negative correlation between prenatal child abuse potential and parental responsivity 1 year after birth was found. A significant, negative correlation was also found between parental child abuse potential and acceptance, indicating that a higher level of child abuse potential was related to lower acceptance/more harsh parenting. Child abuse potential was also significantly, negatively correlated with knowledge of infant development 1 year after birth. Additionally, parental responsivity and acceptance were positively and significantly correlated at age 1, indicating higher levels of responsivity were related to lower levels of harsh parenting.

The Mediating Effects of Knowledge of Infant Development

Knowledge of infant development was significantly correlated with acceptance (i.e., harsh parenting), but not with responsivity 1 year after birth (see Table 2). The possible mediating effect of knowledge of infant development was explored using the PROCESS procedure (Hayes, 2012). This analysis revealed that knowledge of infant development mediated the relationship between prenatal child abuse potential and low acceptance/harsh parenting 1 year after birth (CIs [-.197, -.020]). See Figure 3.

Figure 3. Mediation Model



The possible function of knowledge of infant development as a moderator between child abuse potential during pregnancy and harsh parenting 1 year post-partum was also explored. However, this analysis did not yield any significant moderation.

DISCUSSION

Understanding the relationship between child abuse potential and later parenting practices can help to inform effective interventions to improve the parent-child relationship and prevent future child abuse. These early interventions have the capacity to influence the parent-child relationship before and after birth.

It was not surprising that child abuse potential predicted the mothers' responsivity and harsh parenting when the child was 1 year of age. However, given the significant association between parental responsivity and harsh parenting, it was unexpected that knowledge of infant development showed such a strong relationship with harsh parenting while the association between knowledge of infant development and responsivity did not even approach significance. This may reflect the measurement of responsivity, which, unlike the measurement of harsh parenting, included items related to the mothers' interactions with the researchers in addition to items related to interactions between mother and child. It is also possible that knowledge of infant development can be useful in preventing overt negative parenting behaviors but does not increase positive behaviors, such as displays of warmth and frequency of positive verbalizations.

The finding that knowledge of infant development helps explain the relationship between child abuse potential and harsh parenting could be very useful in informing parenting interventions focused on increasing parents' knowledge of infant development. Considering that child abuse potential was measured prenatally in this study, it is likely these interventions could be effective even when implemented before the child has been born.

Future studies should further examine the relationship between child abuse potential and harsh parenting to better inform early interventions that target child abuse prevention. The influence of knowledge of infant development should also be further examined. More research with high-risk populations is needed, as this group would stand to benefit greatly from preventative parenting interventions, but is underrepresented in the current literature.