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The Development of Disorganized Attachment in Infants of Adult and Adolescent Mothers

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INTRODUCTION

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> Attachment theory proposes that maternal sensitivity is the main developmental determinant of Organized attachment relationships (Ainsworth Blehar, Waters & Wall, 1978; DeWolff & van IJzendoorn, 1997); In contrast, Disorganized attachment relationships are held to be the product of frightened, frightening or atypical maternal behaviour (Lyons-Ruth, Bronfman, & Parson, 1999; Main & Hesse, 1990).

> However, recent research has identified associations between low levels of maternal sensitivity and Disorganized attachment in high-risk populations (Bernier & Meins, 2008; Moran, Forbes, Evans, Tarabulsy, & Madigan, 2008; van IJzendoorn, Scheuvel, & Bakermans-Kranenburg, 1999); This raises the possibility that maternal sensitivity may contribute to the development of Disorganized attachment relationships in high-risk groups.

> Such findings have yet to be replicated in low-risk samples, perhaps suggesting the association between maternal interactive behaviour and the development of Disorganized attachment may differ between high-risk and low-risk populations.

> To better understand differences in the origins of Disorganized relationships between high-risk and low-risk groups, it has been suggested that assessing various aspects of maternal interaction, in addition to overall sensitivity, may be beneficial (Moran et al., 2008).

PURPOSE OF THE CURRENT STUDY

> To directly examine the association of maternal interactions with Disorganized attachment in both a high-risk and low-risk sample.

> A sample of adult mothers were compared to a sample of adolescent mothers, a group characterized by multiple challenges and whose infants are at-risk for various developmental difficulties (Jaffee, Caspi, Moffitt, Belsky & Silva, 2001).

> Assessments of maternal behaviour were made using both global sensitivity, in addition to specific domains of interactive behaviour, to identify various aspects of maternal interaction that may contribute to the development of Disorganized attachment relationships.

METHOD

MEASURES

> **Maternal Behaviour Q-Sort (MBQS, Pederson & Moran, 1995) - Global Sensitivity.** The MBQS consists of 90 items that represent various aspects of maternal interactive behaviour. Q-Sort methodology is used to arrange the items into 9 piles of 10 items each, ranging from pile 1 (Least like the mother) to 9 (Most like the mother). Global sensitivity was calculated as the correlation between the scores of the observers Q-sort with those of a theoretically constructed sort of a prototypically sensitive mother.

> **Maternal Behaviour Q-Sort - Domains of Interactive Behaviour.** Domains of interactive behaviour derived from the items of the MBQS were used to measure the direct content of a mother's interaction with her infant. Domain scores were calculated by averaging the values of all items within a domain (Values were assigned based on which pile an item was placed in during the 90-item Q-sort).

> **Strange Situation Procedure (SSP; Ainsworth et al., 1978; Main & Solomon, 1990).** Attachment relationships were measured using the standardized Strange Situation Procedure (Ainsworth et al., 1978). A dichotomous definition of Disorganization was used in all analyses, with infants who receive a score of 6 or higher, and some who received a score of 5, being categorized as Disorganized.

PARTICIPANTS

	N	Age at Infant's Birth	Average Annual Income	Marital Status	Maternal Education
Adult Mothers	49	> 20 years old	\$30,000 - \$40,000	91% married/common-law; 8.2% single	14.51 years
Adolescent Mothers	49	< 20 years old	\$10,000 - \$19,000	46.4% married/common-law; 53.7% single	11.15 years

PROCEDURE

> **Home Visit:** Two hour home observations were conducted by trained visitors to assess maternal behaviour during mother-infant interactions when infants were 12 months old. Following this, visitors completed the MBQS.

> **Laboratory Visit:** Attachment was assessed using the Strange Situation Procedure at 13 months, following procedures outlined by Ainsworth et al. (1978).

RESULTS

Table 1. Distributions of Attachment Classifications.

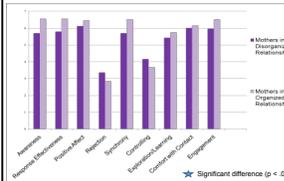
> Adolescent mother-infant dyads were characterized by a greater number of Disorganized attachment relationships, and fewer Secure attachment relationships, than adult mother-infant dyads.

	Secure	Insecure	Disorganized	Total
Adult Mothers	31 (63%)	5 (10%)	13 (26%)	49 (100%)
Adolescent Mothers	15 (31%)	6 (12%)	28 (57%)	49 (100%)

Analytic Strategy: MANOVA's were run to assess differences in global sensitivity and maternal interactive behaviour for mothers in Organized vs. Disorganized attachment relationships for both the adult and adolescent samples.

Table 2. Adult Mothers in Organized vs. Disorganized Relationships.

> There were no significant differences between adult mothers in Organized attachment relationships, and those in Disorganized relationships, on any domains of interactive behaviour.

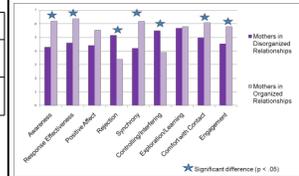


> There were also no significant differences in global sensitivity between adult mothers in Organized attachment relationships ($M = .38$, $SD = 0.65$) and those in Disorganized relationships ($M = .55$, $SD = 0.43$).

RESULTS CONT'D

Table 3. Adolescent Mothers in Organized vs. Disorganized Relationships.

> Adolescent mothers in Disorganized relationships scored significantly lower on multiple domains of interactive behaviour than those in Organized attachment relationships.



> Adolescent mothers in Disorganized relationships also scored significantly lower on global sensitivity ($M = -.15$, $SD = 0.57$) than those in Organized attachment relationships ($M = -.42$, $SD = 0.56$).

DISCUSSION

> Adolescent mothers in Disorganized relationships displayed significantly lower quality interactions than those in Organized relationships, however, the same was not true of the adult group, supporting suggestions that the origins of this attachment pattern may differ between high-risk and low-risk groups.

— In particular, levels of Awareness, Synchrony and Controlling/Interfering showed the greatest differences between mothers in Organized and Disorganized relationships in the adolescent sample, suggesting they may be particularly important contributors to the development of Disorganized relationships in high-risk populations.

> There are several potential explanations for these findings:

— Very low sensitivity and quality of interactive behaviour may reflect behaviour the infant experiences as frightened or frightening (van IJzendoorn et al., 1999), leading to Disorganized attachment through the same mechanisms as current theory suggests.

— Alternatively, sensitivity may represent an alternate pathway to the development of Disorganized relationships in high-risk groups from that of frightened/frightening behaviours (Lyons Ruth et al., 1999).

> Thus, these findings point to the importance of maternal sensitivity and domains of interactive behaviour in the development of Disorganized relationships in high-risk, but not low-risk groups. However, more research is necessary to understand the mechanism through which this association occurs.