

Do mothers with Borderline Personality Disorder Show Deficits in Mind-Mindedness?

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Objective

➤ To compare the MM abilities of mothers with BPD to MM abilities of mothers with no known psychiatric diagnosis during a free play interaction with their 12 month old infants.

Introduction

➤ Mothers with Borderline Personality Disorder (BPD) have been theorized to have decreased mentalization ability, which is the capacity to perceive and interpret mental states (Fonagy, 2005).

➤ Previous work has also demonstrated that mothers with BPD exhibit difficulties in interaction with their infants (Hobson et al. 2005, 2009). However, very little is known about the maternal mental processes that might underlie these relational difficulties.

➤ **Mind-mindedness (MM)**, is defined as the mother's tendency to explain her child's behavior in terms of mental states and is one aspect of maternal behavior that relies heavily on the mother's mentalizing ability.

➤ MM is assessed through the mother's references to her infant's mental states (amount of mind-related comments) during free play interaction (Meins & Fernyhough, 2006).

➤ Affective valence of each mental state comment can also be assessed, whether positive, negative or neutral (Demers et al., 2010).

➤ Studies have found MM to relate to positive child developmental outcomes, including attachment security (Laranjo et al., 2008; Lundy, 2003) and theory of mind understanding (Laranjo et al., 2010; Meins et al., 2002).

➤ Research has yet to examine MM in mothers with BPD during interaction with their infants.

Participants and Methods

- **38 mother-infant dyads** (17 boys) from two previously published studies, including:
 - Cohort 1: 10 mothers with BPD and 20 mothers with no psychiatric diagnosis (Hobson, 2005).
 - Cohort 2: 8 mothers with no known psychiatric diagnosis (Laranjo et al. 2010).

➤ Infant age was **12 months old** (mean: 54.5 weeks) and mean maternal age was 33 years old.

➤ BPD diagnosis was made using the Structured Clinical Interview for DSM-III-R (SCID-II).

Maternal Mind-mindedness (MM)

- **MM codes for 5 types of mind-related comments:**
 1. On the infant's **desires and preferences** (e.g., "You want this book").
 2. On the infant's **cognitions** (e.g. "You know this game").
 3. On the infant's **emotional engagement** (e.g., "You're angry", "You've had enough").
 4. On the infant's **attempts to manipulate** other people's thoughts (e.g., "You're making fun of me").
 5. Comments that involved the **mother speaking for the infant** (e.g., "See mom, it's easier this way").

➤ MM assessed based on a 2-minute videotaped free play sequence between mother and infant.

➤ Verbal content was transcribed and coded using Meins & Fernyhough (2006) guidelines.

➤ Number of **Total, Appropriate, Non-Attuned, Positive, Negative and Neutral** mind-related comments were coded.

➤ **Appropriate:** when the coder agrees with the mother's interpretation of her infant's state of mind.

➤ **Non-Attuned:** when the coder disagrees with the mother's reading of the infant mental state.

➤ **Positive, Negative or Neutral:** when maternal comment refers to something positive (e.g. being happy), negative (e.g. being angry) or neutral (e.g. knowing).

➤ All variables were expressed as a percentage of total number of comments to control for differences in mother's verbosity.

➤ Interrater reliability was excellent for all variables (ICC >.96 on 25% of the videos for Cohort 1 and >.89 on 56% of the videos for Cohort 2).

Results

TABLE 1. Total Maternal Comments and Percentages of Total Comments That Were Mind-Related by Appropriateness and Affective Valence Among Mothers With and Without BPD.

| | BPD n=10 | | Controls n=28 | | ANOVA | | |
|---------------------------------------|-------------|-------|------------------|-------|-------------|------|----------------|
| | M (SD) | Range | M (SD) | Range | F | p | η ² |
| Total number of maternal comments | 47.2 (23.5) | 12-77 | 41.4 (19.4) | 3-86 | 0.58 | 0.45 | 0.02 |
| Mind-related comments (%) | 14.7 (9.3) | 0-32 | 17.3 (9.8) | 0-36 | 0.49 | 0.48 | 0.02 |
| Appropriate mind-related comments (%) | 11.4 (7.3) | 0-33 | 16.3 (9.4) | 0-25 | 2.19 | 0.15 | 0.06 |
| Non-attuned mind-related comments (%) | 3.5 (5.1) | 0-16 | 0.7 (1.7) | 0-7 | 5.77 | 0.02 | 0.13 |
| Positive mind-related comments (%) | 1.9 (3.2) | 0-9 | 1.1 (2.5) | 0-10 | 0.65 | 0.43 | 0.01 |
| Negative mind-related comments (%) | 0.8 (1.8) | 0-5 | 0.5 (1.2) | 0-4 | 0.48 | 0.50 | 0.01 |
| Neutral mind-related comments (%) | 12.5 (8.3) | 0-26 | 15.6 (10.0) | 0-33 | 0.82 | 0.37 | 0.02 |

Note. η² (eta square) statistic indexes effect size; square root of eta indicates percent variance accounted for by group membership.

➤ ANOVA indicated that BPD and non-BPD mothers did not differ in the proportion of total comments that referred to infant mental states (Table 1), nor in the proportion of total comments that had an affective valence of positive, negative, or neutral.

➤ However, they **did differ significantly** in the proportions of total comments that were mind-related but non-attuned, with BPD vs control group status accounting for 36 % of the variability in such comments. Mothers with BPD proportionately made 4.7 times more non-attuned mind-related comments than control mothers, who had a very low rate of non-attuned comments.

Discussion

➤ Mothers with and without BPD appear equally likely to envision and refer to mental states in their infants. However, mothers with BPD appear more likely to misread the mental states of their infants.

➤ This suggests that the deficit in mentalization shown by mothers with BPD takes the form of more frequently **misinterpreting** the mental states of their infants. A better understanding of those misinterpretations could guide therapeutic mother-infant interventions and potentially prevent intergenerational transmission of mental health problems.