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Factors Affecting the Mother-Infant Relationship in Mothers with Depression: Preliminary Results from a Pilot Study

Trudy Mak, Julia MY Or & Krystal CK Lee

Department of Psychiatry, LKS Faculty of Medicine, The University of Hong Kong

correspondence: leeckk@hku.hk

Background

- Maternal depressive symptoms may adversely affect the quality of mother-infant bonding, possibly contributing to long-lasting negative effects on child development
- This study aims to assess mother-child bonding and identify factors contributing to strained early mother-infant relationships in Chinese mothers with depression

Results

- 28 (68%) and 7 (17%)** of 1 mother-child dyads had **any** and **severely impaired mother-infant relationship** C-PBQ total score over 25 and 39, respectively
- 32 (78.1%) had impaired bonding subscale scored over 11
- 13 (31.7%) with infant-focused anxiety with score over 9
- 8 (19.5%) with rejection of infant with rejection and pathological anger subscale scored over 11
- 10 (24.4%) with incipient abuse with score over 1
- Father's educational level** (OR = 2.509, $p < 0.05$), **family income** (OR = 2.26, $p < 0.01$), **mothers' report of tense relationship with their own parents** (OR = 9.71, $p < 0.05$), **parental stress** (OR = 1.137, $p = 0.01$) & mother's **level of anxiety** (OR = 1.034, $p < 0.05$) were significant predictors of problematic parent-infant relationships.

Method

- Subjects were Chinese women with SCID-5 confirmed depressive disorders and a child below 2 years old, recruited at the Comprehensive Child Development Service Psychiatric Out-patient Clinic in Queen Mary Hospital
- Mother-child bonding was measured by the Chinese Post-partum Bonding Questionnaire (C-PBQ)
- Parental stress was assessed using the Parenting Stress Index (PSI)
- Anxiety and depressive symptoms were measured by State-Trait Anxiety Inventory (STAI) and Edinburgh Postnatal Depression Scale (EPDS)
- Subjective tension in relationship with parents was rated in 3-point likert scale
- Factors relating to impaired bonding were assessed by logistic regression

Figure 1. PBQ scores and distributions

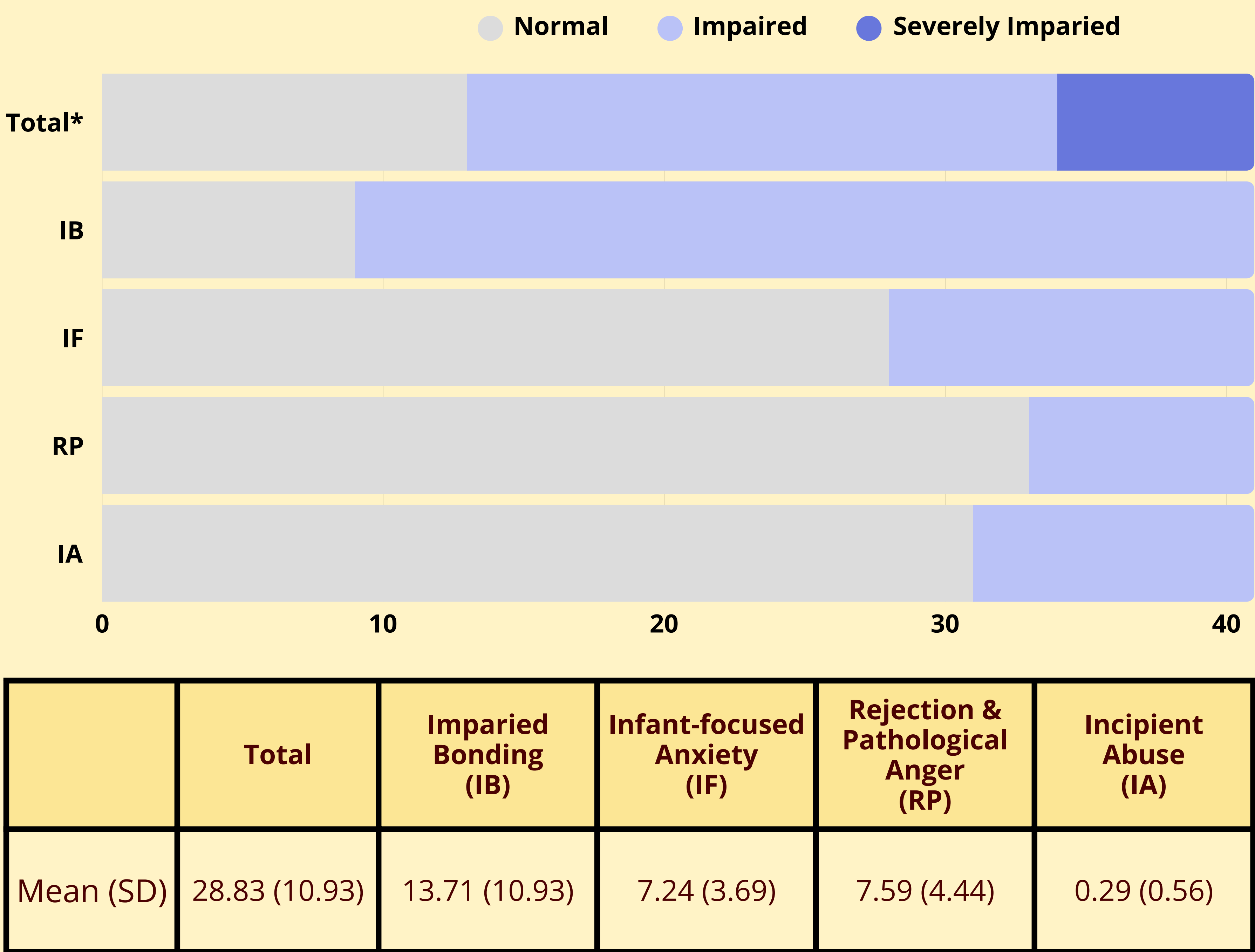


Table 1. Sociodemographic characteristics of the study sample (N = 41)

	N (%)
Mother's age group	
<30	6 (14.6%)
Mother's education level	
Teritary or above	25 (61.0%)
Tension in relationship with parents (mean, SD)	
Tension level with parents	1.42 (0.6)
Mother's symptoms score (mean, SD)	
EPDS	15.3 (5.3)
STAI - I (state)	40.6 (12.7)
STAI - II (trait)	42.8 (10.4)

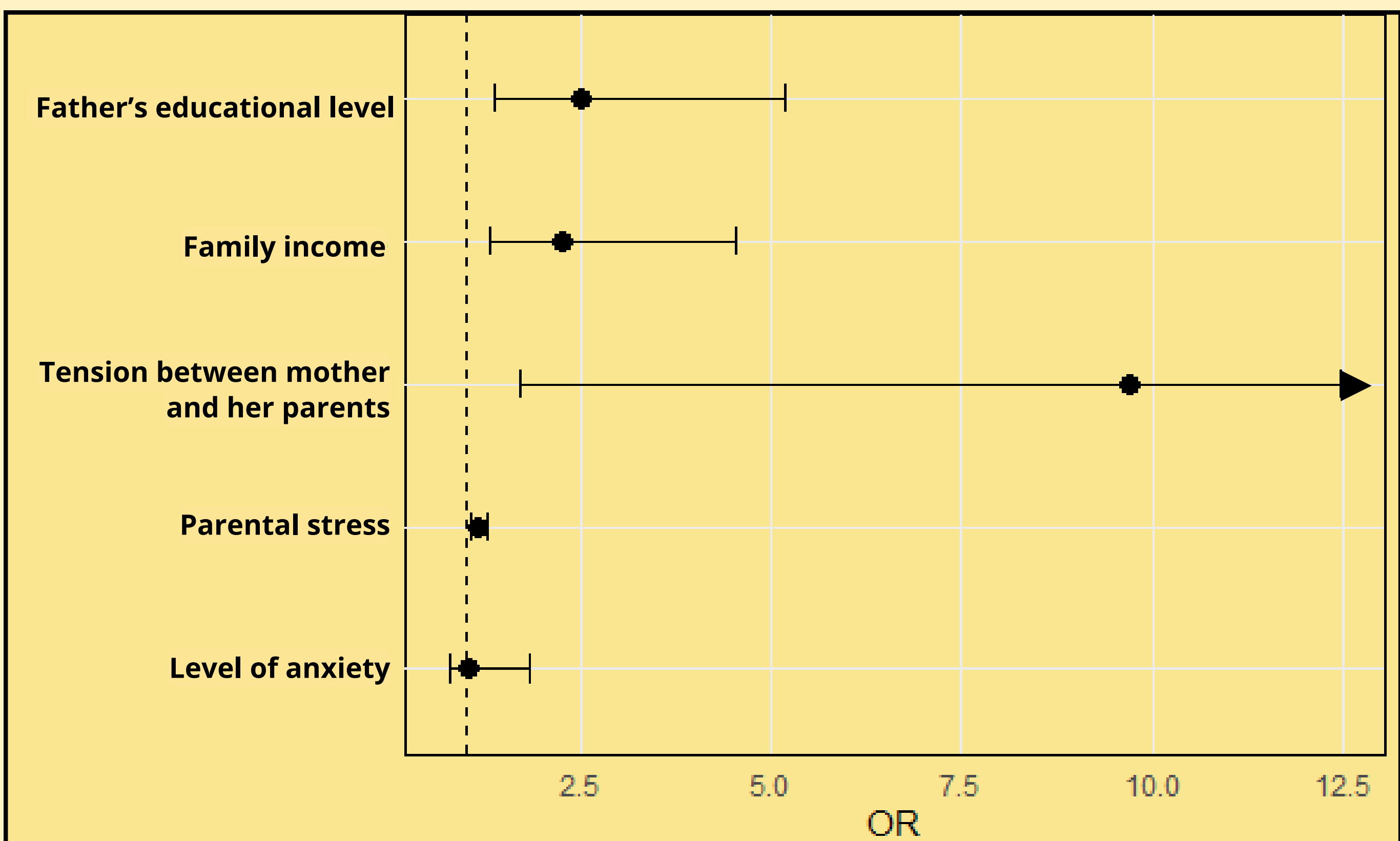
	N (%)
Father's age group	
<30	3 (7.3%)
Father's educational level	
Teritary or above	25 (61.0%)
Father's history of mental illness	
No	40 (97.6%)

	N (%)
Family income	
≤\$15,000	4 (9.8%)
\$15,001 - \$60,000	20 (48.9%)
>\$60,000	17 (41.5%)
Living area	
101 - 300 sq. ft	5 (12.2%)
301 - 500 sq. ft	17 (41.5%)
501 - 800 sq. ft	15 (36.6%)
>800 sq. ft	4 (9.8%)

Table 2. Odds ratios for PBQ scores above cut-off

Predictors & PBQ scales	Total	IB	IF	RP	IA
Mother's age	1.186	1.392	0.843	0.676	1.308
Mother's educational level	1.572	1.582	1.441	0.989	1.087
Father's age	1.256	1.256	1.056	0.876	1.309
Father's educational level	2.509*	2.288*	1.447	1.004	1.520
Family Income	2.259*	1.792*	2.161*	1.715	1.093
Living area	2.336	3.330*	2.613*	2.316	2.082
Tension between mother and her parents	9.712*	1.020	0.678	1.027	1.609
Parental stress (PSI)	1.137*	1.219*	1.033	1.028	1.006
Level of anxiety (STAI-II)	1.034*	1.057	1.073	1.057	1.017

Figure 2. Forest plot of OR of significant predictors of PBQ total scores



* $p \leq 0.05$

Conclusion

These initial results suggested a high prevalence of problematic mother-child relationships in postnatal mothers with depression, and those with higher income, higher perceived stress and high tension with their own parents were at risk of impaired mother-child bonding. Intergenerational transmission of poor parent-child relationships appeared to be evident; and the positive relationship between family income, father's education level and impaired bonding warranted further investigation.

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