



12 year longitudinal study: Maternal depressive symptoms and prenatal antidepressant treatment on internalizing and anxiety behaviors in children



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Introduction

- ~10-20% of women experience depression and/or anxiety during the perinatal period
- These women are commonly treated with a selective serotonin reuptake inhibitor antidepressants (SSRI)
- Prenatal SSRI exposure has been associated with increased internalizing and anxious behaviors in children 3- 6 years of age¹⁻³
- However, it is not known if these results will be found in older children

Hypothesis

- Prenatal maternal mood would be associated with persistently higher levels of internalizing and anxiety in children at 3, 6, and 12 years, even when accounting for prenatal SSRI treatment and concurrent maternal depressive symptoms.



Methods

Participants

191 mothers with and without SSRI prenatal treatment and their children

Measures:

1. Demographic questionnaire
2. Clinician-rated measure of depressive symptoms at 3rd trimester, and 6 and 12 years post-partum⁴
3. Self reported measure of depressive symptoms at 3 year time point only⁵
4. Maternal report of child internalizing and anxiety behaviors⁶⁻⁸



Table 1: Descriptive Statistics

	Non-exposed	n	SSRI exposed	n	T / χ^2 value	p-value	Effect size (r) ^b
Maternal Characteristics							
Age at birth of child	33.65	110	32.70	76	1.22	.223	.09
Education (years)	17.73	113	16.36	76	2.83	.005	.20
HAMD third trimester	5.58	102	10.12	73	-5.26	< .001	.37
HAMD 6 years	6.28	72	10.98	51	-4.14	< .001	.35
HAMD 12 years	5.63	57	9.84	31	-3.17	< .001	.32
BDI 3 year	4.22	88	8.12	59	-4.59	< .001	.36
BDI 12 year	6.79	14	7.50	6	-0.24	.814	.06
Children Characteristics							
Sex at birth (females), n (%)	58 (52.7%)	110	42 (55.2%)	75	0.19 ^a	.764	.03 ^c
Age at 3 years	3.53	88	3.85	59	-3.22	.002	.26
Age at 6 years	5.81	89	6.12	56	-2.73	.007	.22
Age at 12 years	11.68	74	11.88	38	-0.90	.368	.09
CBCL at 3 years							
Internalizing problems	45.88	88	49.56	59	-2.15	.034	.18
Anxiety problems	51.73	88	52.20	59	-0.56	.648	.04
HBQ at 6 years							
Internalizing symptoms	0.28	88	0.38	54	-2.58	.011	.21
Overanxious score	0.36	88	0.48	54	-2.42	.017	.20
CBCL at 12 years							
Internalizing problems	51.16	73	58.14	37	-3.35	.001	.31
Anxiety problems	54.89	73	58.70	37	-2.46	.016	.23

Results

- Multilevel mixed effects models revealed that prenatal maternal depressed mood, not prenatal SSRI exposure, was associated with longitudinal patterns of higher levels of internalizing and anxiety behaviors across childhood from 3 to 12 years of age.
- At each age, hierarchical regressions showed that prenatal maternal depressed mood, compared with concurrent maternal depression or prenatal SSRI exposure explained a greater proportion of the variance in internalizing and anxiety behaviors.

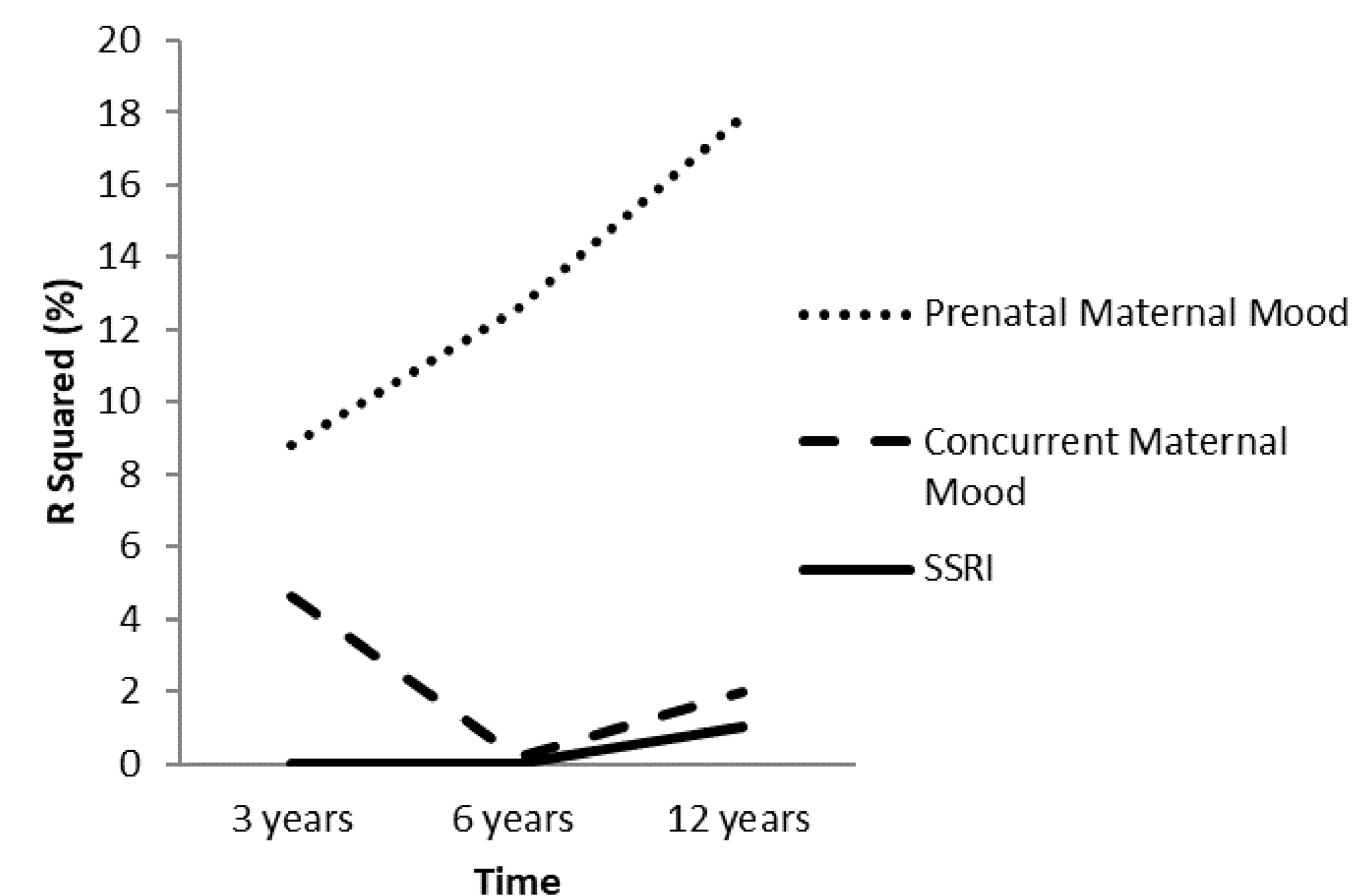
Conclusions

- Regardless of maternal prenatal SSRI treatment, development in children of depressed mothers remain disproportionality at risk.
- We will be following up with this cohort one last time in 2022

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Figure 1
Proportion of relative unique explained variance of prenatal maternal mood, concurrent maternal mood, and prenatal SSRI exposure in internalizing behaviors at 3, 6, and 12 years of age in children



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