

Mental health around the transition to first birth: Does Medically Assisted Reproduction matter?

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- Positive association between parenthood and well-being around the the time of birth in panel data analyses
 - ▶ Happiness increases around the year of birth, then it decreases to before-child levels
 - Timing is important: the average change in well-being before and after birth might be underestimated in standard fixed effects models.
 - e.g. Myrskylä and Margolis (2014); Clark et al. (2008)
 - ▶ This literature does not consider differences between natural and medically assisted conceptions.

Do these effects reflect the experience for everyone?

- Proportion of individuals undergoing Medically Assisted Reproduction (**MAR**) has increased remarkably since the 1980s.
 - ▶ More than 8 million children born after MAR (ESHER).
 - ▶ Assisted Reproductive Technologies (IVF and ICSI) and simpler techniques (e.g. ovarian stimulation and artificial insemination).
- MAR is an intensive procedure and may cause distress.
 - ▶ an Hormonal therapy for all MAR treatments
 - ▶ Time Intensive (e.g. Consultations, blood tests, ultrasounds, and daily hormone injections repeated for multiple cycles).

- Additionally, a set of negative experiences may **indirectly** affect the well-being of MAR parents.
 - ▶ Possible mechanisms: Anxiety about treatment success or about health of children; stigma attached to MAR; quality of partner relationships; and conflicts with other life sphere.
- **Selection** can have both positive (high SES) and negative (infertility) effects on well-being.
- Several studies compare successful and unsuccessful MAR.
 - ▶ Cross-sectional: unclear how mental health varies before and after MAR pregnancy, and whether couples are able to adjust after birth.

- Analyse mental health trajectories before and after pregnancy by considering the mode of conception.
 - ▶ Are the effects different based on the mode of conception?
 - ▶ Does MAR affect this process negatively? If so, when and for how long?
 - ▶ Does MAR affect both women and men's mental health?

- UK Household Longitudinal Study
- Eight waves (2009/2011 – 2016/2018)
- **Analytical sample:**
 - ▶ Childless women aged 18-49 at baseline who became pregnant during the observation window
 - Most MAR children are first births
- **Dependent variable**
 - ▶ Mental Health component Summary score SF-12
 - 6 questions regarding mental health
 - ▶ Screening tool to detect mental health disorders
 - ▶ Range: 0 (low functioning) -100 (high functioning)

- **Independent variable**

- ▶ “Since [date of the last interview] have you been pregnant at all, even if this did not result in a live birth?”.
- ▶ The number of months that elapsed between the date of pregnancy and the date of interview.

- **Medically Assisted Reproduction:**

- ▶ “Did you receive any form of fertility treatment before becoming pregnant?” (including: IVF, medication, sperm donation, egg donation, or artificial insemination).
- ▶ Not possible to look at unsuccessful treatments.
- ▶ Not possible to know when they had the first cycle of MAR.

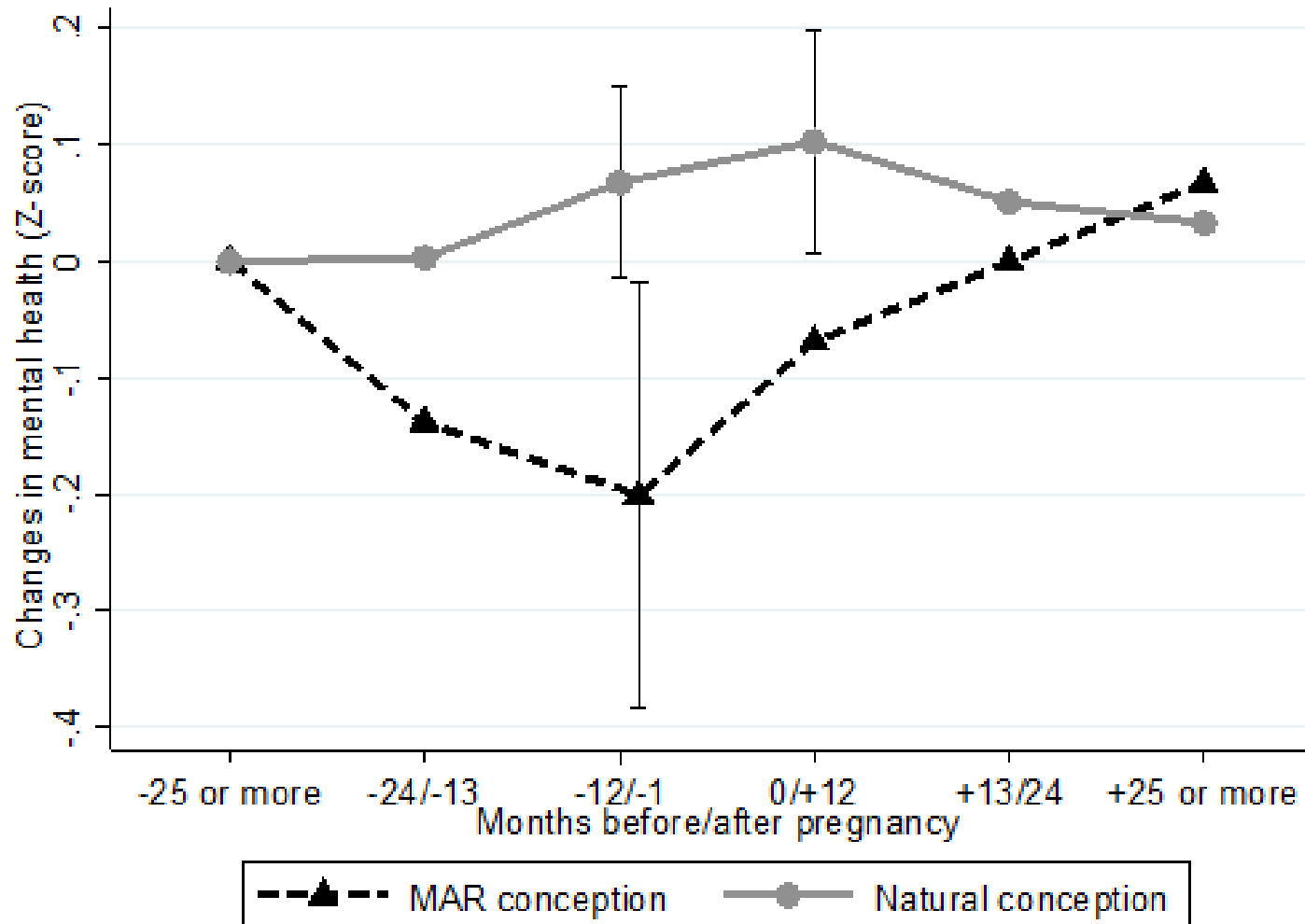
- **Distributed fixed effects linear regression models.**
 - ▶ Within-person changes in mental health before and after pregnancy amongst childless women
 - ▶ We take account of individual time-invariant characteristics, something particularly relevant for couples who conceive through MAR. They have characteristics that can be both positively (e.g. high socioeconomic status) and negatively (e.g. subfertility) associated with mental health.
- Unbalanced panel. On average 5.5 observations per individual: 1,954 women with a natural (10,595 observations) pregnancy, and 125 women who used MAR to conceive (758 observations).

Results

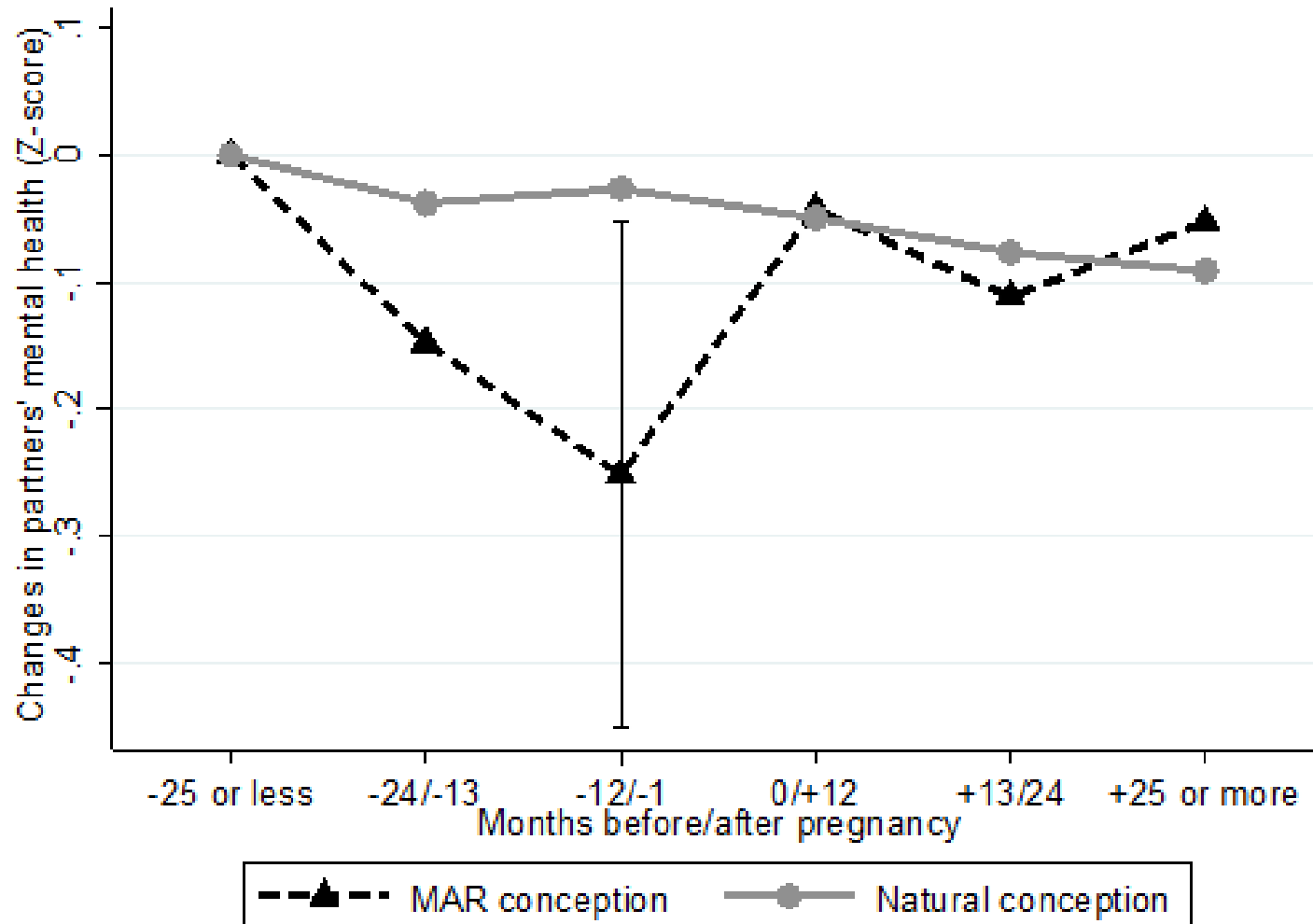


	M1 Coef.	M2 Coef.	M3 Coef.	Distributed FE Models predicting changes in SF-12 Mental Health (Z-score)
Months before/after pregnancy				
Natural pregnancy (Ref. -25 or more)				
-24/-13	-0.01	-0.01	0.00	
-12/-1	0.08*	0.09*	0.07	
0/+12	0.11*	0.12*	0.10*	
+13/+24	0.03	0.04	0.05	
+25 or more	-0.01	0.00	0.03	
MAR pregnancy (Ref. -25 or more)				
-24/-13	-0.11	-0.11	-0.14	
-12/-1	-0.20*	-0.19*	-0.20*	
0/+12	-0.07	-0.04	-0.07	
+13/+24	-0.04	-0.01	-0.00	
+25 or more	0.02	0.05	0.07	
No live birth		-0.19*	-0.18*	
Personal income (log), Employment and marital States, and satisfaction with leisure time			Yes	
Year-Observations	11,353	11,353	11,353	
N. of women	2,079	2,079	2,079	

Results for women

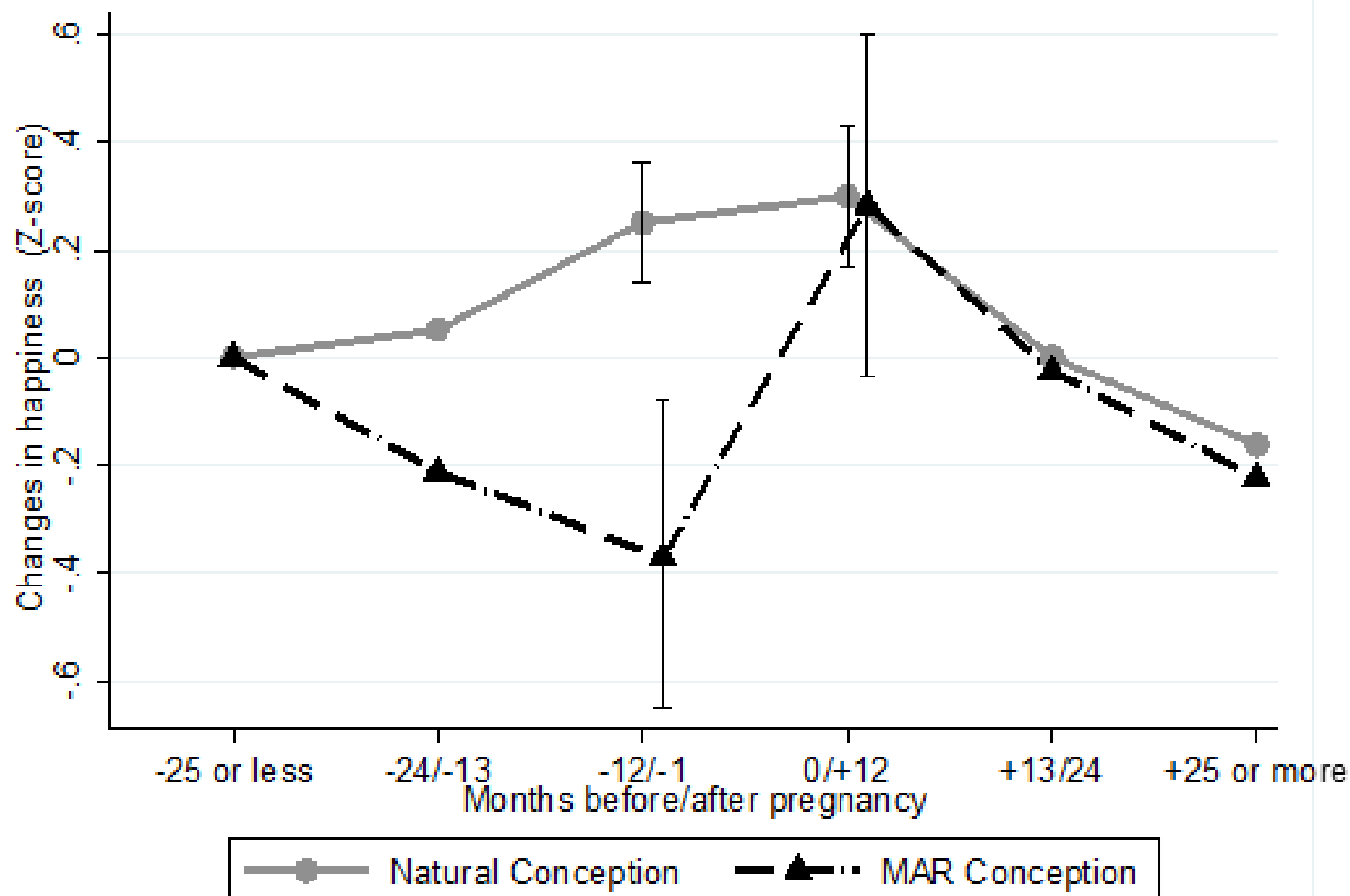


Results for partners

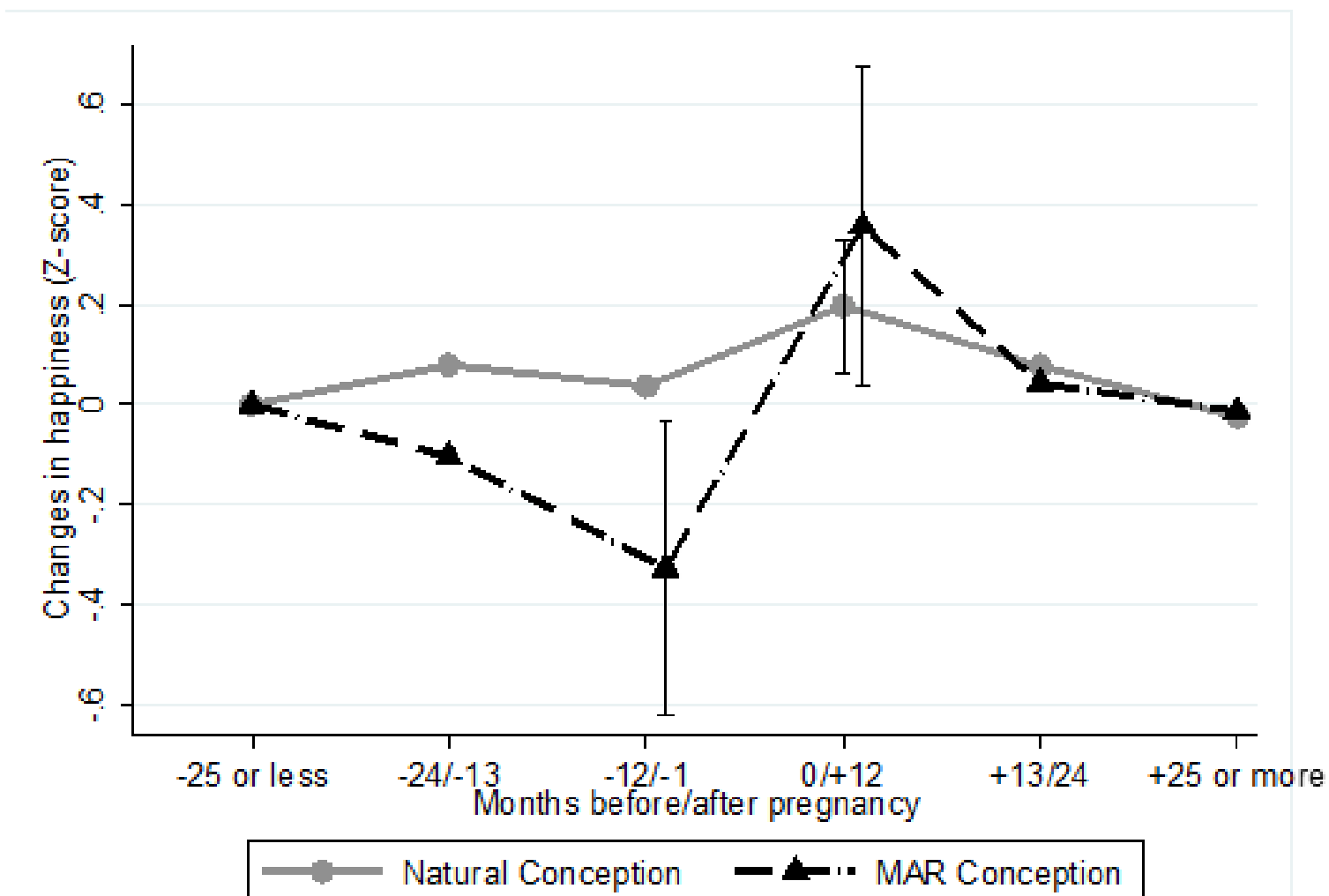


N= 7,525 obs;
1,551 partners
(mostly men)

Results on happiness (women)



Results on happiness (partners)



Preliminary conclusions

- The link between the transition to pregnancy and mental health is heterogeneous according to the mode of conception.
 - ▶ Consistent with the existing family literature, women who conceive naturally experience a short-term improvement in mental health in the months preceding conception/birth
 - ▶ Conversely, women who conceive through MAR experience a short-term decline in mental health followed by recovery.
 - ▶ MAR partners' mental health declines in the year before pregnancy and then returns to the baseline level.

Thank you for your attention

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