LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

The effect of fertility on parents' happiness

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Introduction

- „Regretting Motherhood“, based on interviews with 23 Israeli biological mothers (Donath 2015):

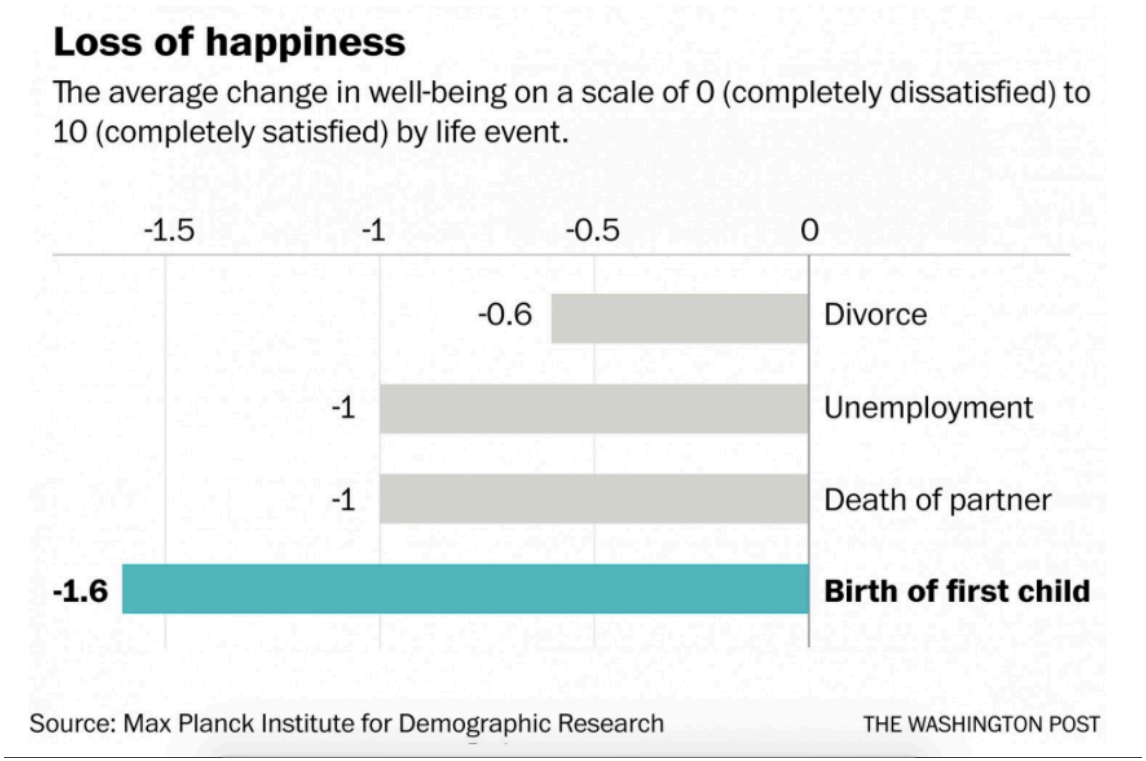
“Already during pregnancy I have sensed regret. (…)
I understood it was a mistake, yes.”

“After the first birth I understood that the coupledom relationship will never be the same, that from this day on I need to look after another human being beside me (…).”

Children add “virtually nothing to life, apart from perpetual difficulty and worry”.

Introduction

- „It turns out parenthood is worse than divorce, unemployment — even the death of a partner“
  (Washington Post, August 11th 2015, citing Margolis & Myrskylä 2015)



Mechanisms

- Why do we expect a non-constant effect of children on their parents‘ happiness?

  - **Economic theory**
    - Benefits and costs of children vary with their age:
      - Younger children need more care than older children
      - Higher direct costs of older compared to younger children
      - Opportunity cost compensation by welfare state (“Elterngeld”)
      - …

  - **Predetermined setpoint**
    - “Each individual […] tends to restore well-being to a predetermined setpoint after each change in circumstances (Kahneman 1999: 14)
    - “Hedonic treadmill“ (Brickman and Campbell 1971)
    - Genetic disposition explains different happiness levels (see twin studies)

Previous research: 3 recent papers

- Myrskylä & Margolis (2014)
  - SOEP & BHPS
    - Positive anticipation effects already 2-3 years before birth
    - Effect lasts 1-2 years
    - Effect of a first child is never significantly negative

- Pollmann-Schult (2014)
  - SOEP
    - Controlling for costs, also older children make their parents happy.

- Mikucka (2015)
  - Russia Longitudinal Monitoring Survey 1994-2012
  - Hardly comparable, all models control for mediating mechanisms

Data & Sample

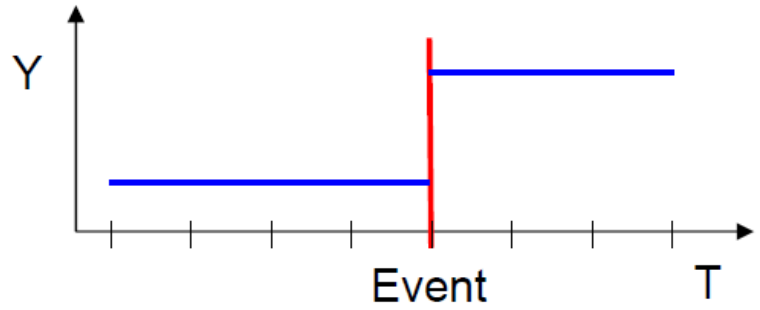
- pairfam - The German Family Panel (v6.0)
- 6 waves, 3 cohorts
- Usually 1 year between interviews
- Separate analyses of women and men
- Censored at second pregnancy

Analytic Sample I	Women	Men
N (Persons)	3.568	3.905
N (Person years)	10.511	11.227
N (first births)	427	393

The Basic Fixed-Effect-Model

- Dependent Variable
  - Life satisfaction (happiness)
- Explanatory variable
  - Age of first biological child, in 3-month-intervals
  - Dummy impact function with anticipation effects

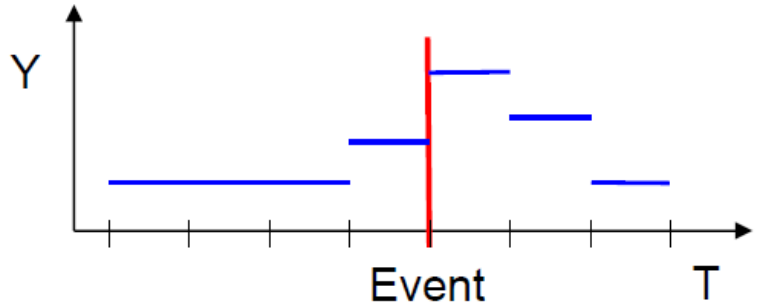
Step- vs. Dummy-Impact-Function



Step impact function

Immediate and permanent impact

- event dummy (0,0,0,0,**1**,**1**,**1**)



Dummy impact function

Arbitrary impact (including anticipation effect)

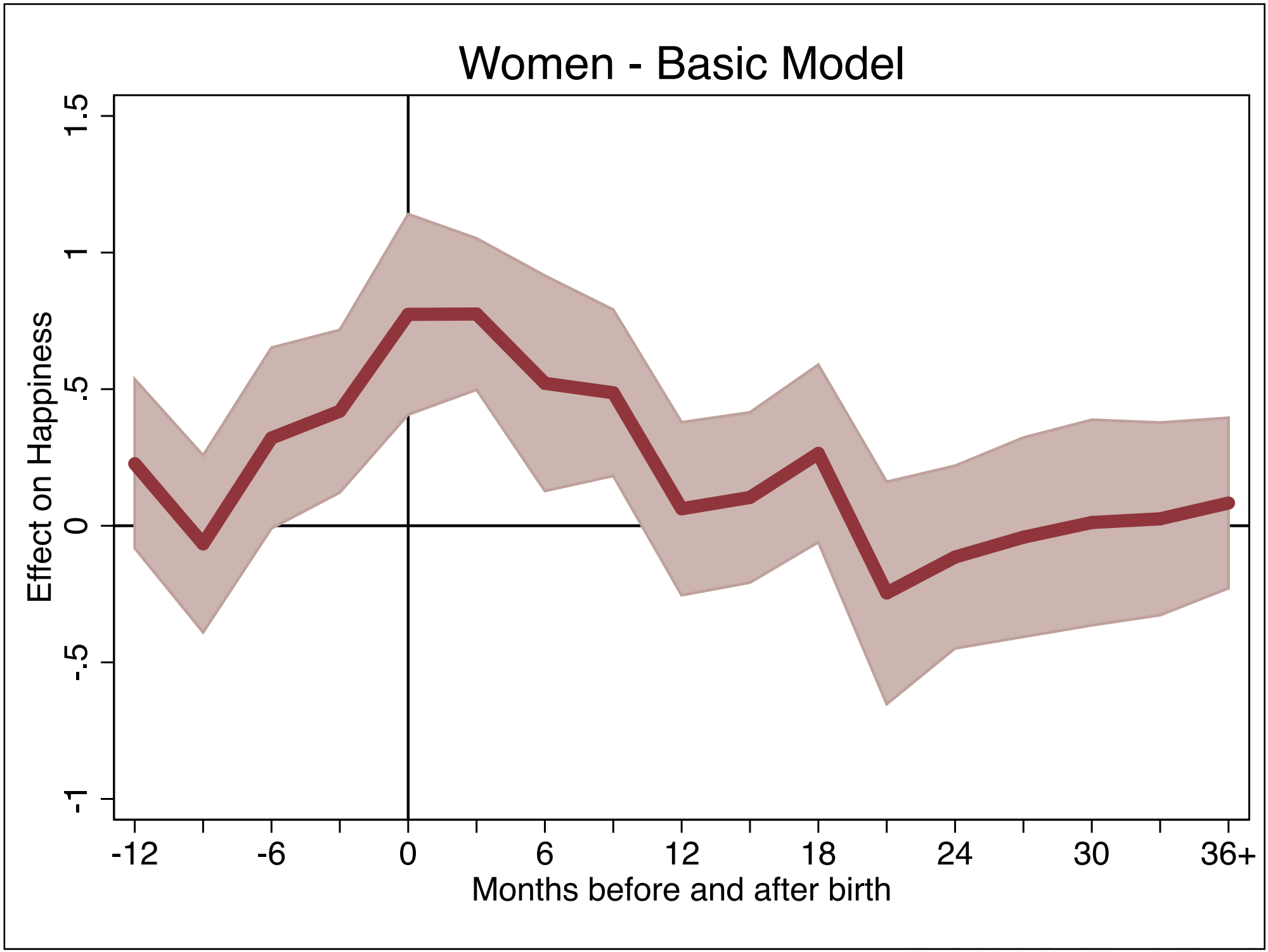
- dummy event time
  - -1 dummy (0,0,0,**1**,0,0,0)
  - 0 dummy (0,0,0,0,**1**,0,0)
  - 1 dummy (0,0,0,0,0,**1**,0)
  - 2 dummy (0,0,0,0,0,0,**1**)

(c.f. Brüderl 2015)

The Basic Fixed-Effect-Model

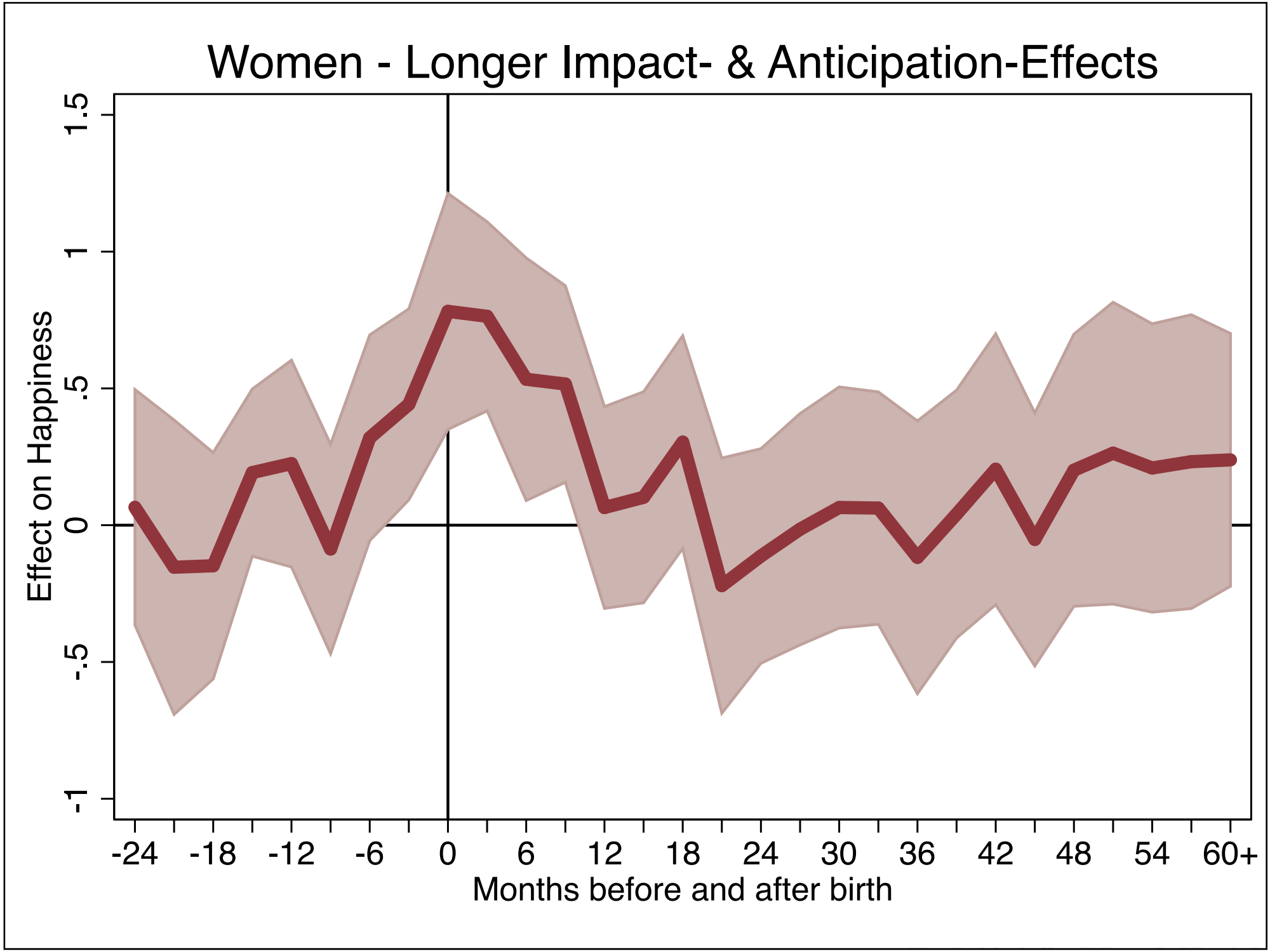
- Dependent Variable
  - Life satisfaction (happiness)
- Explanatory variable
  - age of first biological child, in 3-month-intervals
  - Dummy impact function

- Controls
  - Period (wave dummies)
  - Age (lin., sq., cub.)
  - Relationship-, cohabitation- and marriage-duration (categories)
  - Infertility (of respondent and/or partner)


Women - Basic Model
Effect on Happiness
1.5
1
.5
0
-.5
-1
-12
-6
0
6
12
18
24
30
36+
Months before and after birth

Robustness of Findings

- Alternatives in preparing and analysing data:
  - Longer impact and anticipation-effects


Women - Longer Impact- & Anticipation-Effects
Effect on Happiness
-1
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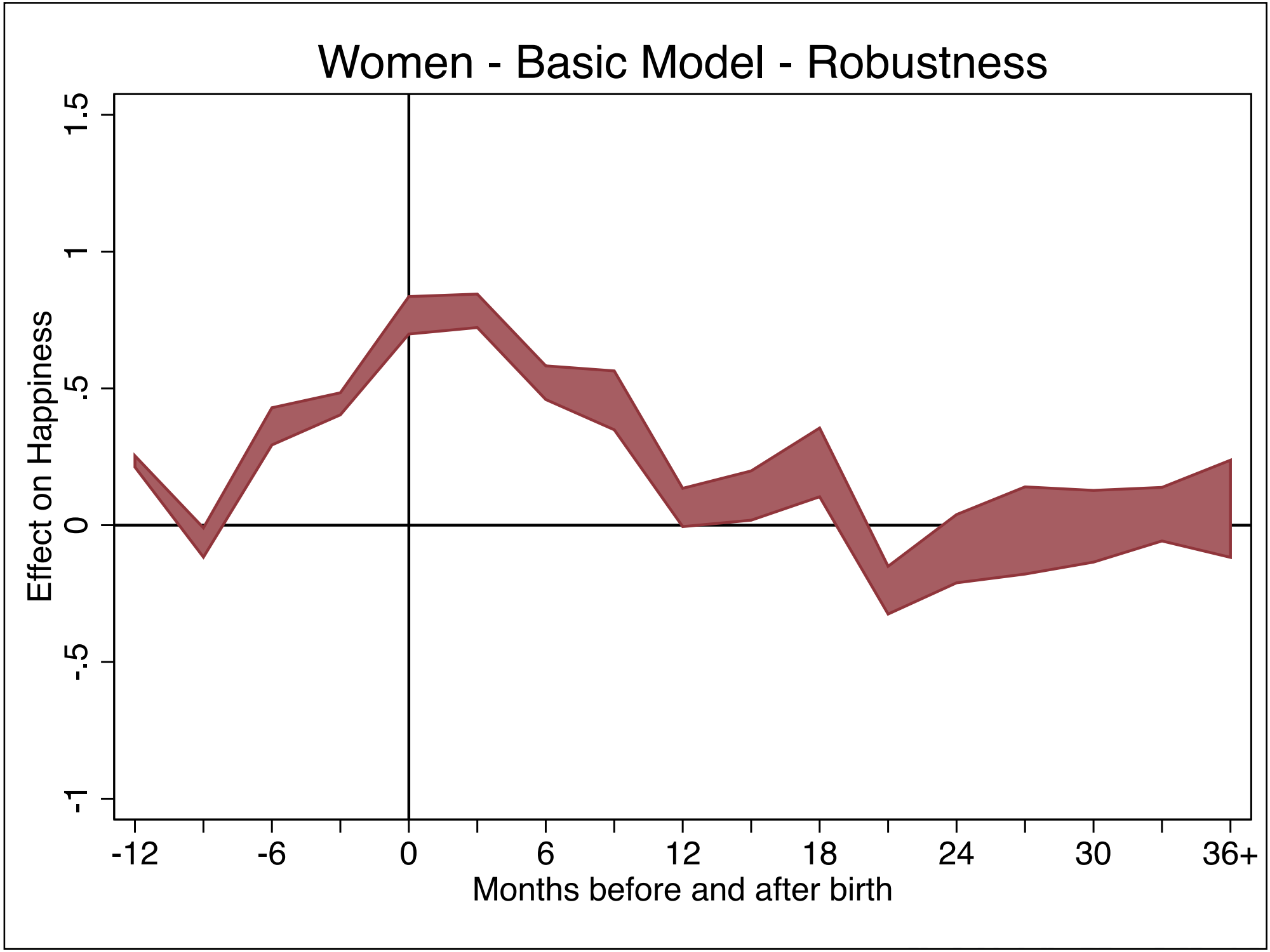
1.5
-24
-18
-12
-6
0
6
12
18
24
30
36
42
48
54
60+
Months before and after birth

Robustness of Findings

- Alternatives in preparing and analysing data:
  - Longer impact and anticipation-effects
  - Alternative definitions of first births
  - Not censoring at the second pregnancy or birth
  - Controlling for higher order births with impact functions
  - Alternative or no controls for age and/or period
  - No controls for partnership-, cohabitation and marriage duration

→ 19 alternative model specifications tested


Women - Basic Model - Robustness
Effect on Happiness
1.5
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-6
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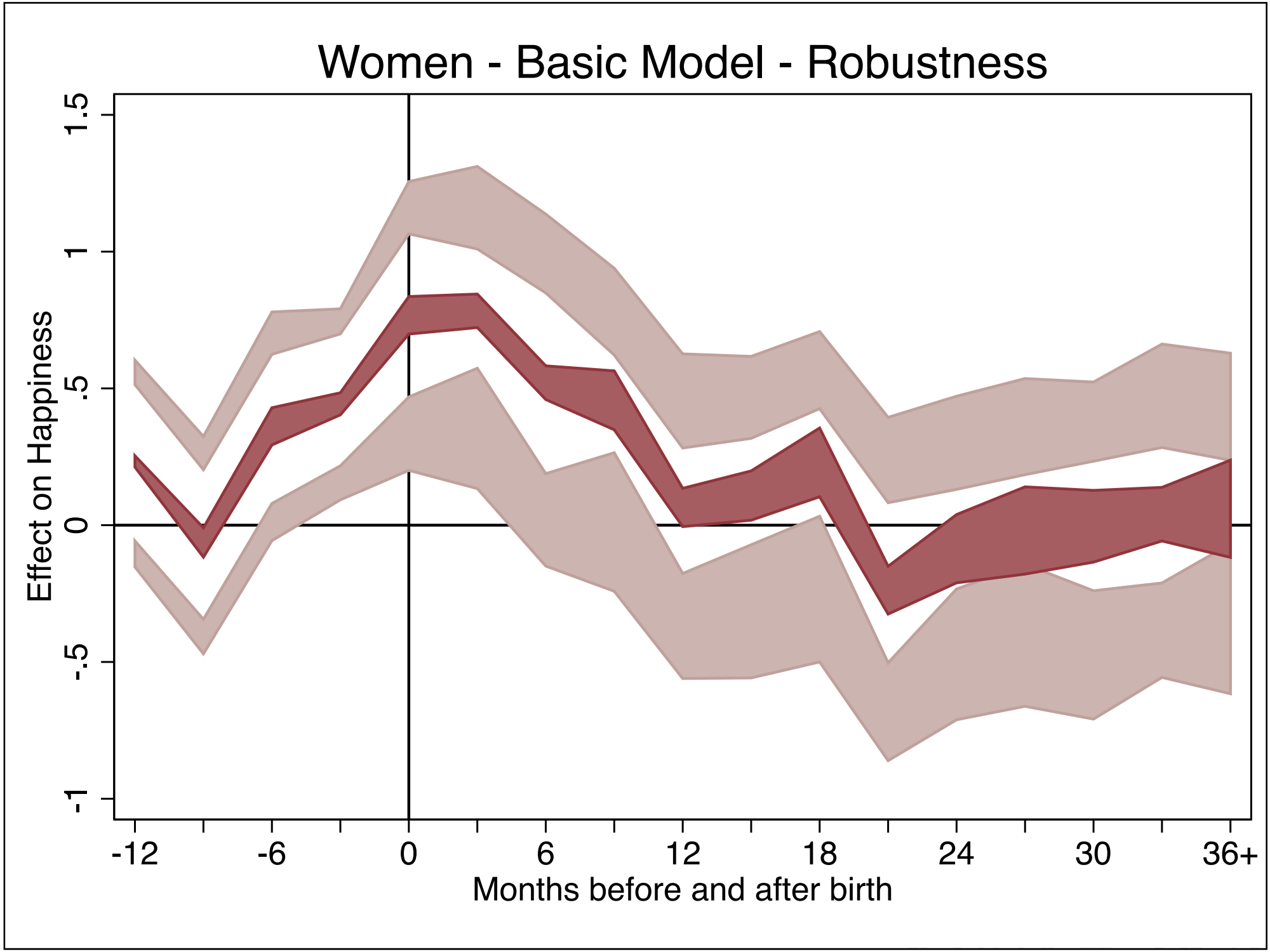
18
24
30
36+
Months before and after birth


Women - Basic Model - Robustness
Effect on Happiness
1.5
1
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0
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-1
-12
-6
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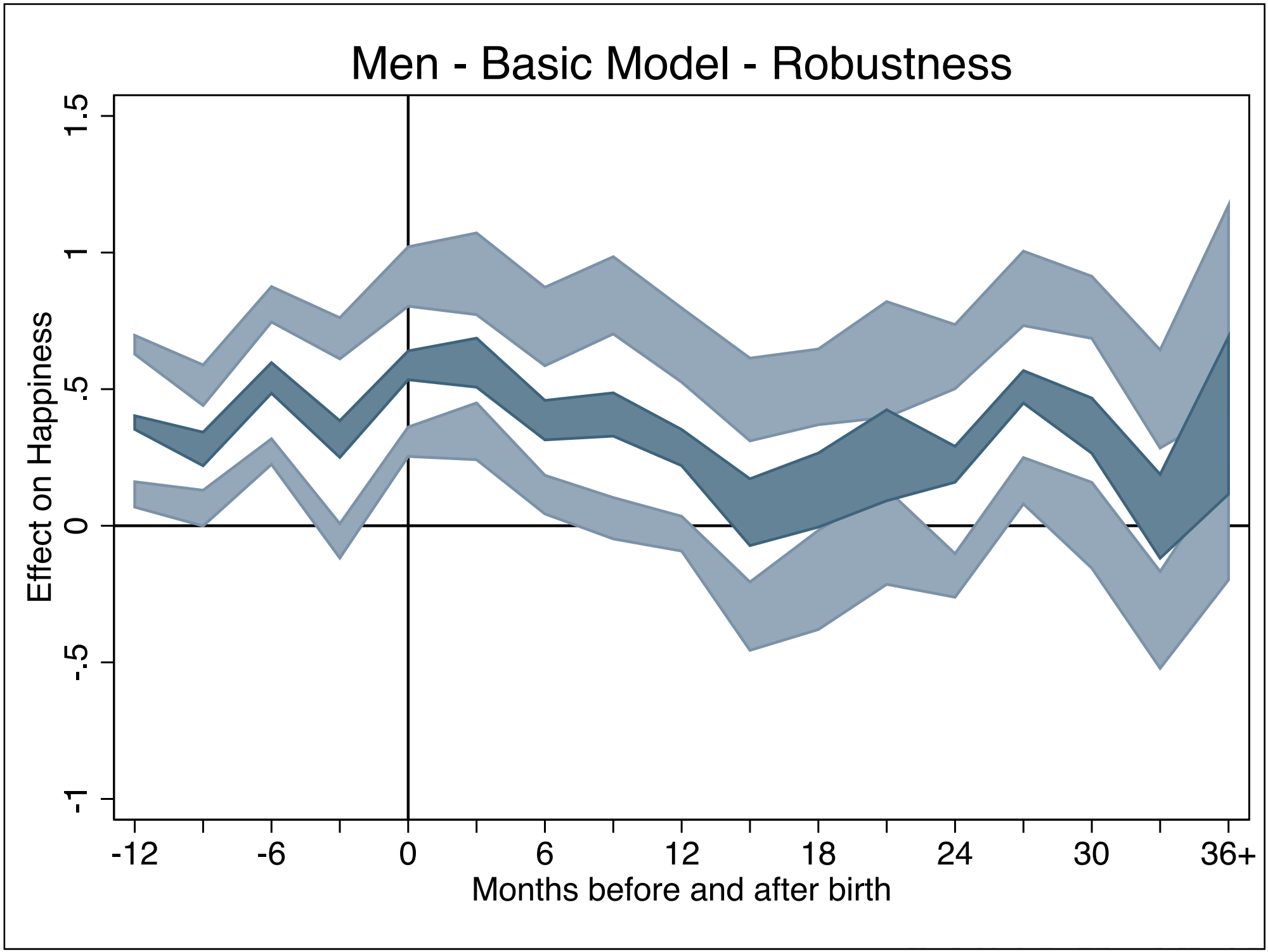
18
24
30
36+
Months before and after birth

Men

- Results for men compared to women

  - Similar patterns
  - Equally robust

  - Weaker effects
    (0.6 versus 0.8, 0-3 months after the first birth)
  - Anticipation effect not as strong, but longer
    (happiness increases already 12 versus 6 months before the birth)


Men - Basic Model - Robustness
Effect on Happiness
1.5
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-12
-6
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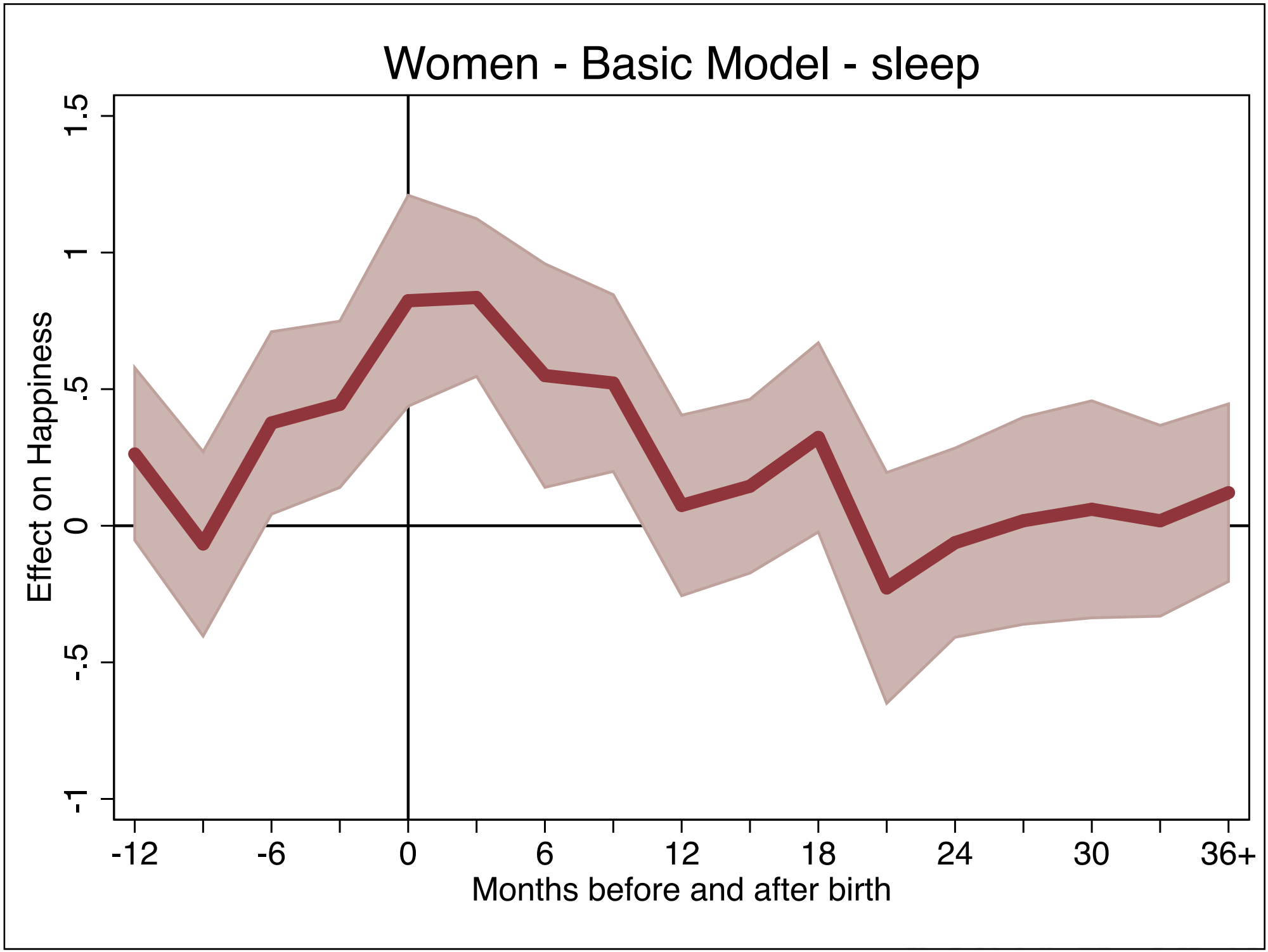
18
24
30
36+
Months before and after birth

Mechanisms

- Potential mediators (controls for costs): Change in
  - Objective income (household net income, personal net income)
  - Subjective income (making ends meet, 2 items)
  - Hours of sleep on an average day during the week
  - Subjective health
  - Frequency of sexual intercourse and satisfaction with sex

  - Pregnancy as explanation for anticipation effects (women)
  - Pregnancy of the partner as explanation for anticipation effects (men)


Women - Basic Model - sleep
Effect on Happiness
1.5
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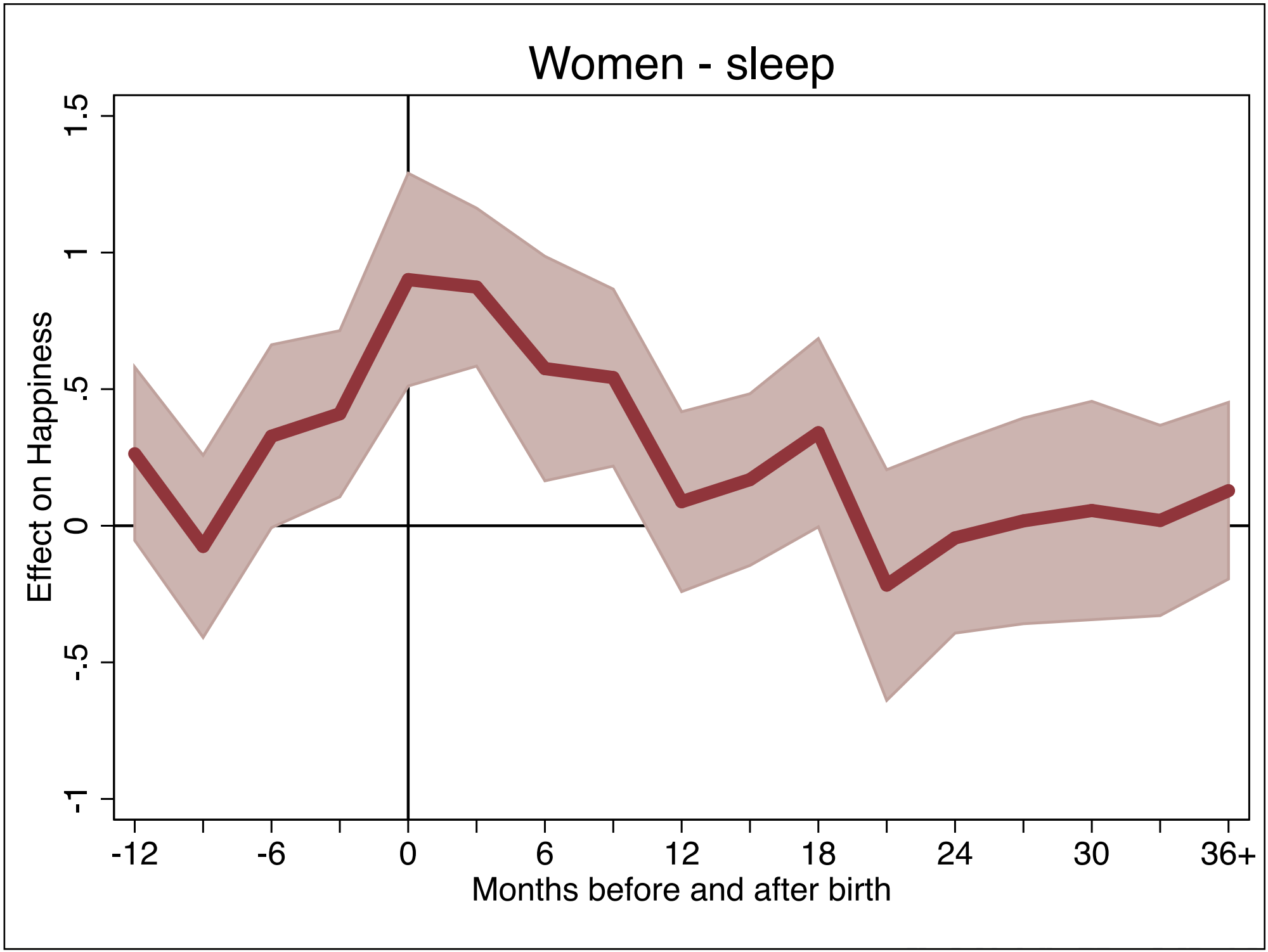
36+
Months before and after birth


Women - sleep
Effect on Happiness
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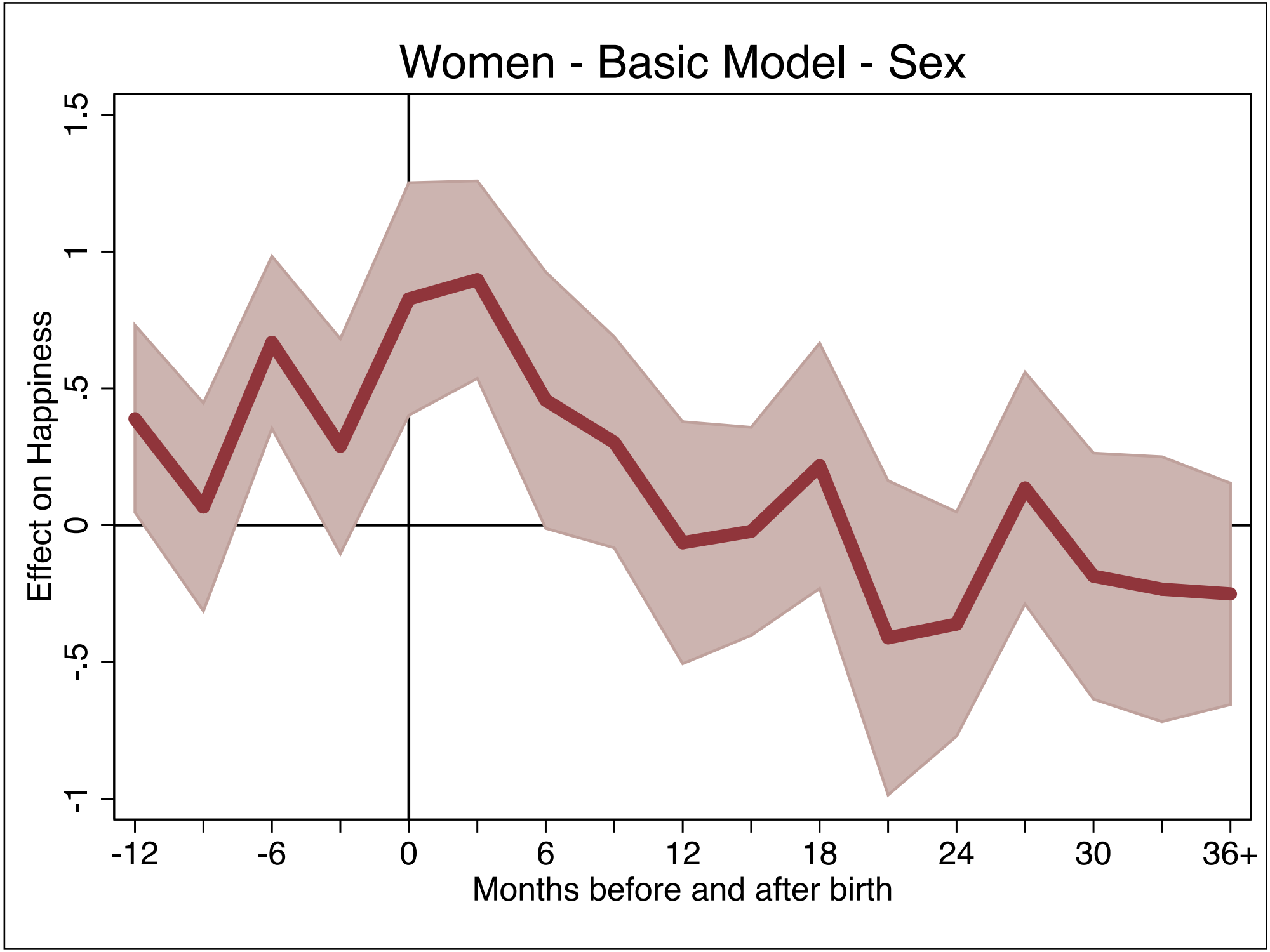
Months before and after birth


Women - Basic Model - Sex
Effect on Happiness
1.5
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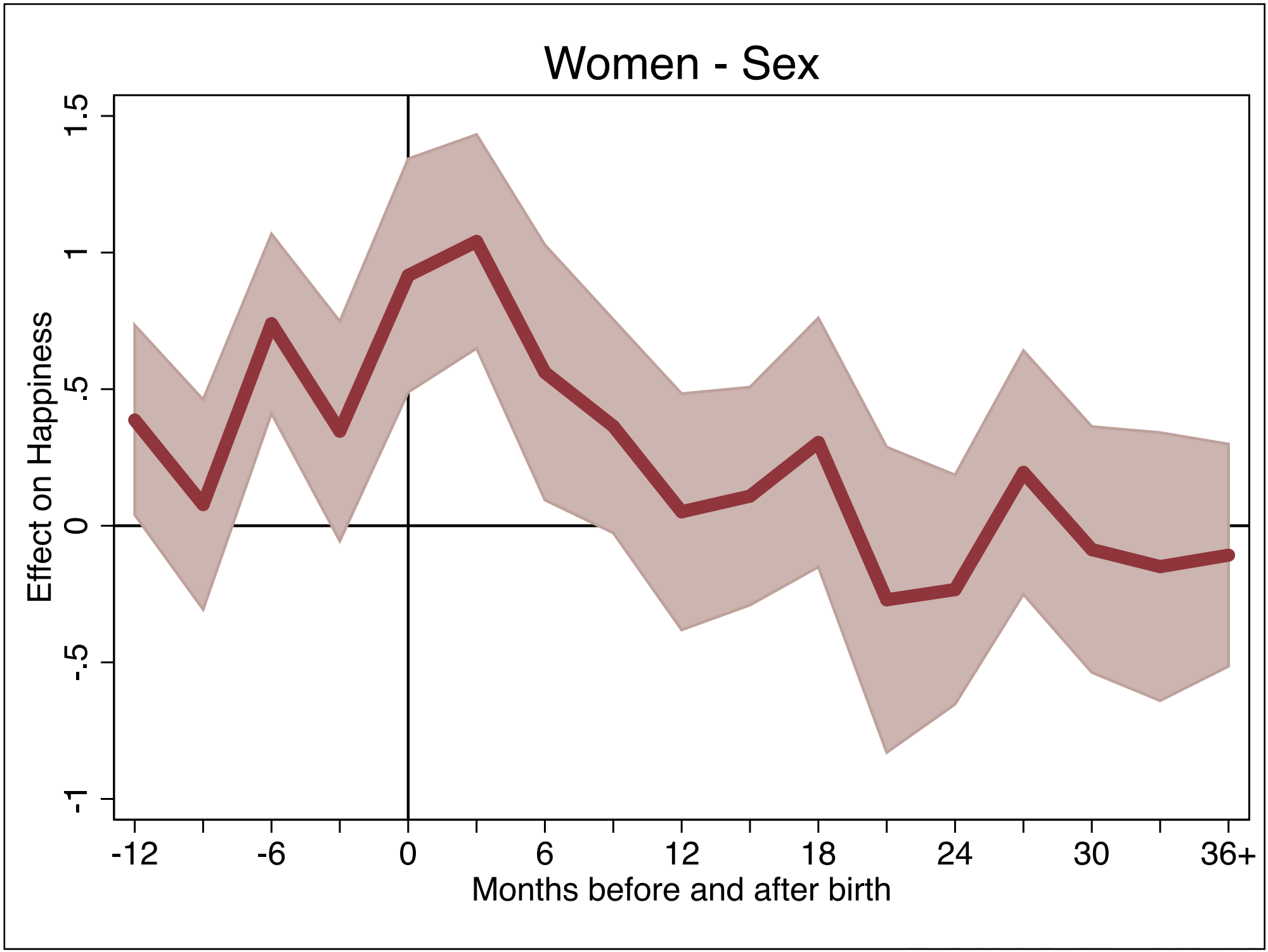
36+
Months before and after birth


Women - Sex
Effect on Happiness
1.5
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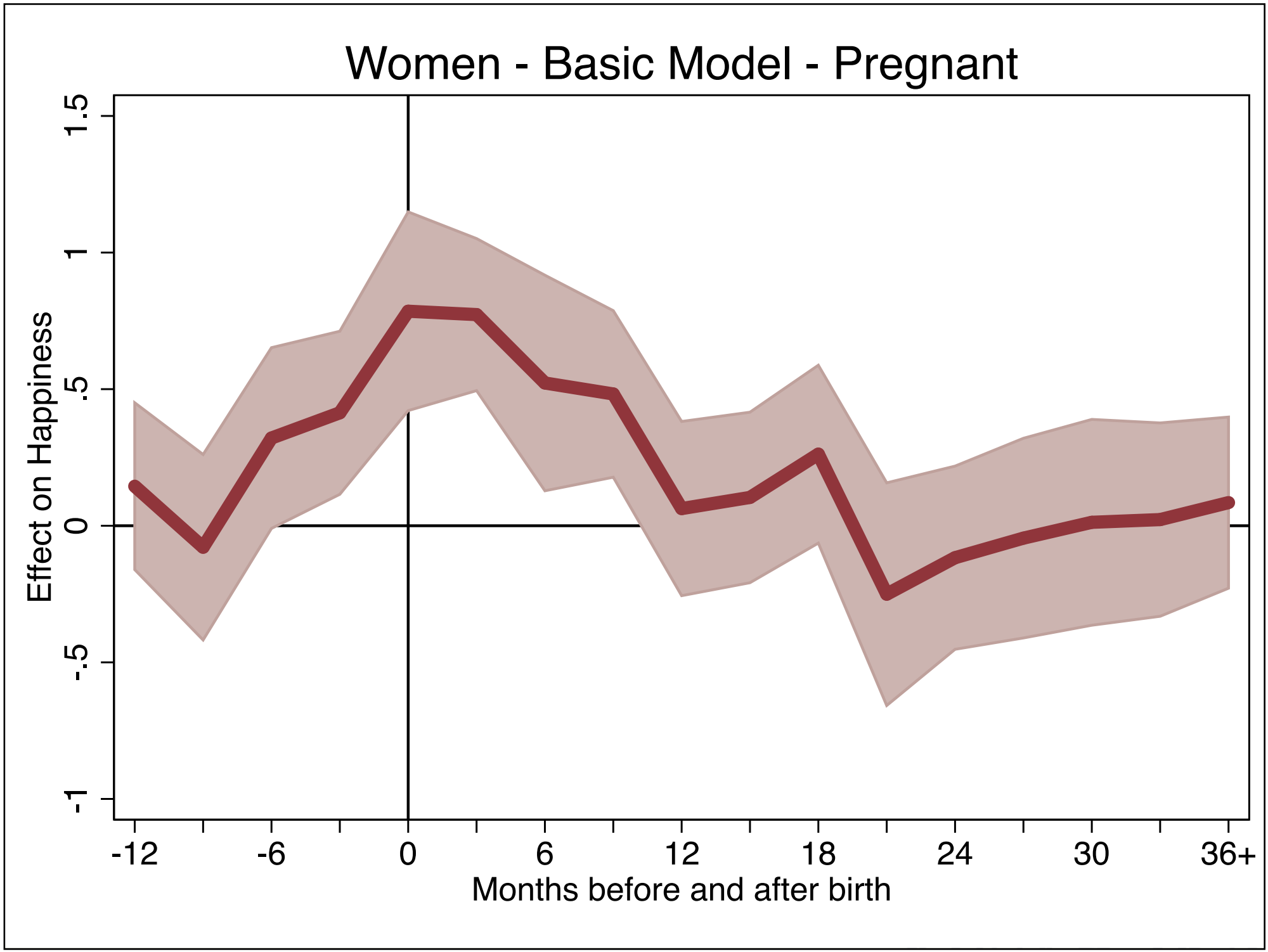
36+
Months before and after birth


Women - Basic Model - Pregnant
Effect on Happiness
1.5
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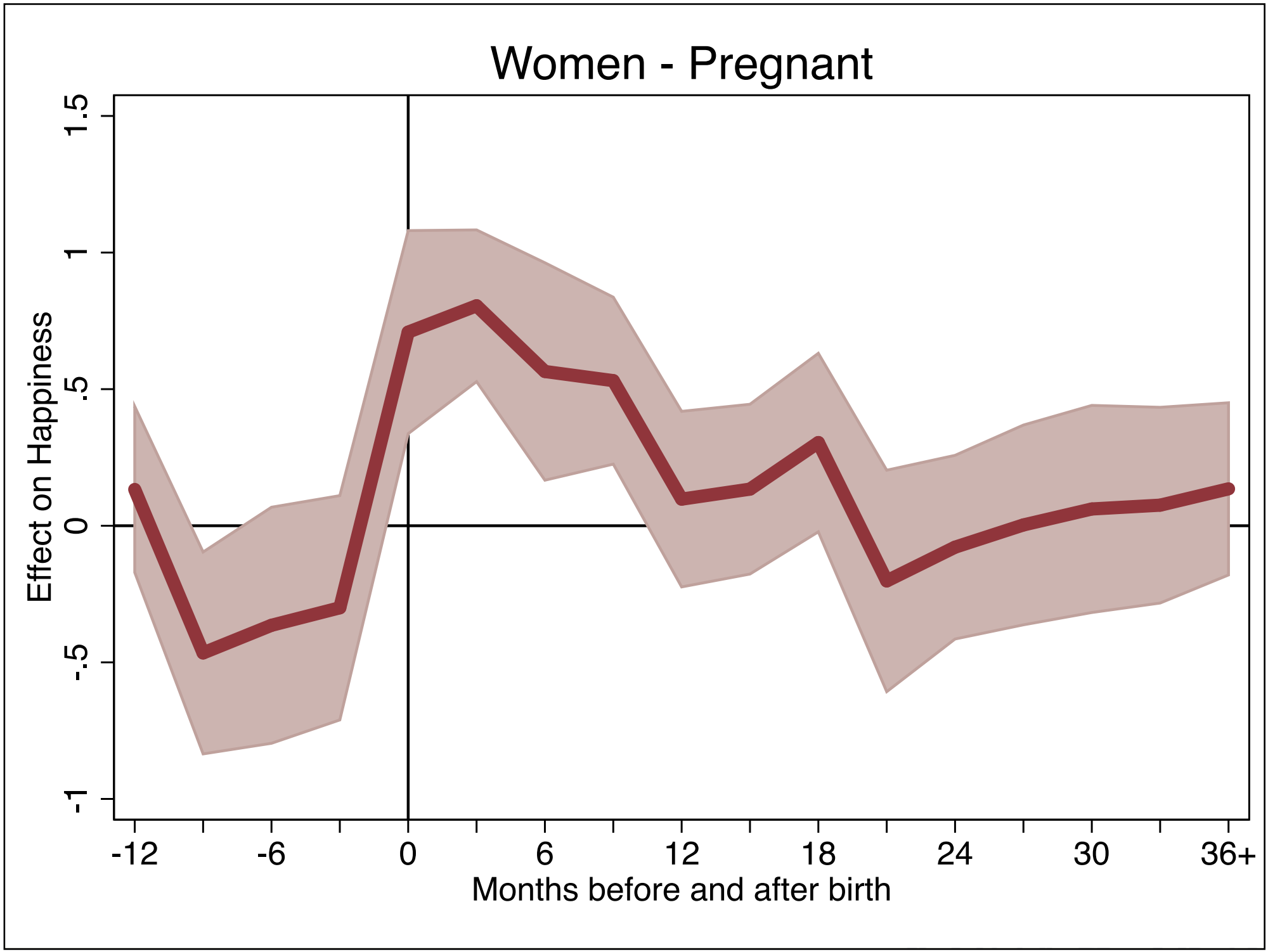
24
30
36+
Months before and after birth


Women - Pregnant
Effect on Happiness
1.5
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-1
-12
-6
0
6
12
18
24
30
36+
Months before and after birth

Mechanisms

Mediators	Women	Men
Objective income	✗	✗
Subjective income	✗	✗
Health	✗	✗
Hours of sleep	✗	✗
Sexual freq. & sat.	✗	✗
Pregnant	✓	
Partner pregnant		✗

Summary & Discussion

- Time-varying effect of children on parents‘ happiness
- Successful reproduction of Myrskylä & Margolis (2014)
  - with a more detailed impact function
- Costs (as far as already controlled for) do not significantly moderate the impact function.

- Possible remaining explanations:
  - Variation in unobserved costs
  - Variation in benefits: Cuteness
  - Setpoint theory

Lessons Learned: Impact Functions

- Build impact functions by hand, do not use Lag- and Lead-Operators within the Stata regression command
  - Otherwise, we loose many waves!
- If waves are missing for some respondents: ensure to account for this, recode data by waves, not by lines
- We recommend the use of dates (e.g. the difference between a birthday and the day of interview)

- Graph the range of impact function as a robustness check (coefplot with gen-option -> min/max -> rarea)