It Takes Two: A Longitudinal Dyadic Study on Predictors of Fertility Outcomes

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International User Conference of the German Family Panel pairfam, Best Paper Award Talk, May 7th-8th 2015, Jena, Germany

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European Birth Rate Declines

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The natural increase in Europe's population is slowing and may start a ste
decades, researchers say.

Researchers writing in the journal Science said European population grow
the year 2000 when the number of children dropped to a level that statistic
fewer parents in the next generation than there are in the current generati

In effect, the authors say, the momentum for population growth in the 15-r
flipped from positive to negative and the trend could strongly influence pop
the 21st century

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emotional
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History's mysteries: Why do birth rates decrease when societies modernize?

g today, birth rates have been declining in
lized, and technologically advanced. In fact,
ies -- such as Japan, Germany, and Italy --
r cause of concern in these countries, whose
orce will be able to support a growing elderly
grams that award their citizens money

ot clear which factors directly cause the
re more effective and readily available to
ra hands on the farm? Or has raising children

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The EU's baby blues

ion are falling fast.

In the first of a series about motherhood and the role of the state in encouraging couples to have more children, the BBC News website's Clare Murphy asks why governments are so concerned about the size of their populations.

Willia
ago, a
today

US Government Info | Gover

U.S. Birth Rate Hits All-Time Low

By Robert Longley, About.com Guide

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Continuing a 12-year decline, the U.S. birth rate has dropped
data have been available, according to statistics just released
(CDC). The rate of births among teenagers also fell to a new r
began in 1991.

The birth rate fell to 13.9 per 1,000 persons in 2002, down fr
down a full 17 percent from the recent peak in 1990 (16.7 pe
report, "Births: Preliminary Data for 2002." CDC analysts say
increasing life span of Americans results in a smaller proportic

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Why Won't Germans Have More Babies?

**Chancellor Angela Merkel's government has pumped billions i
pockets to encourage them to make more babies -- but they s
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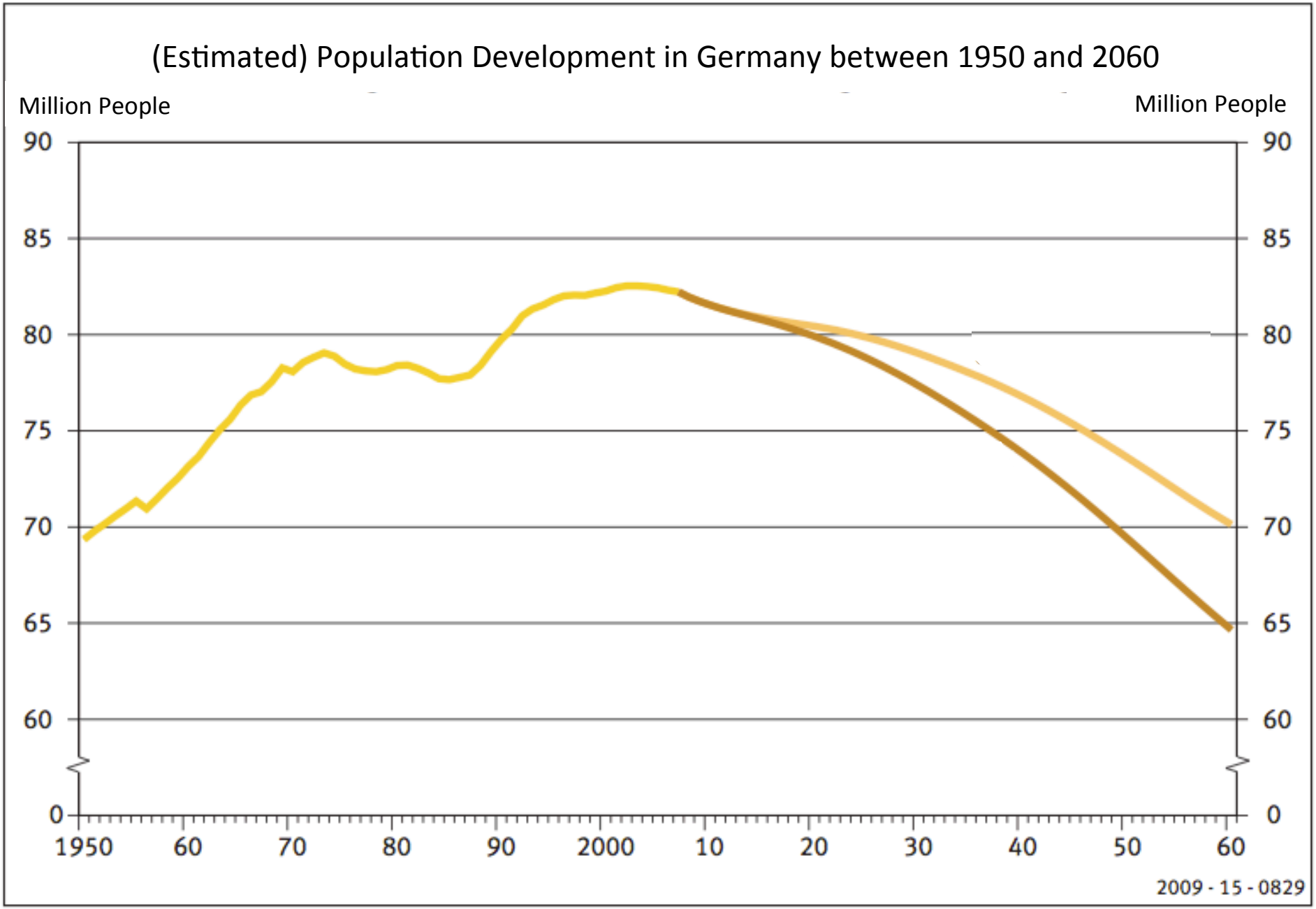
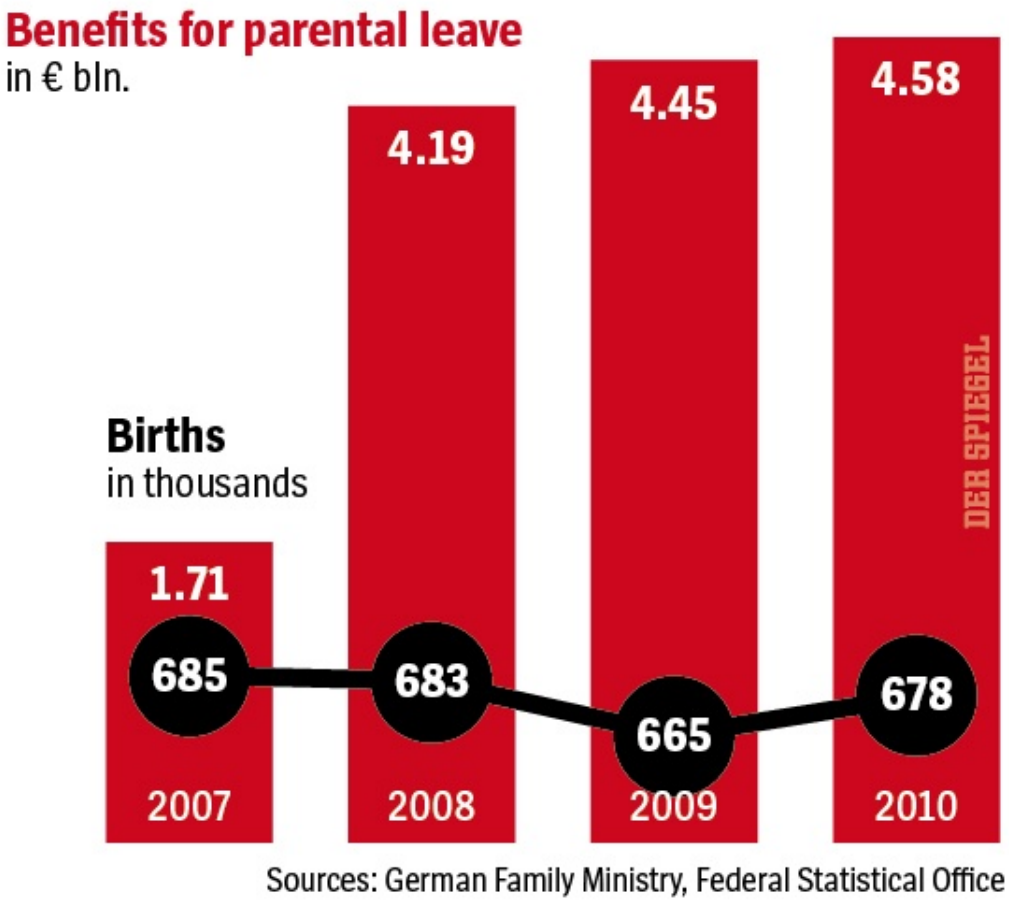

(Estimated) Population Development in Germany between 1950 and 2060
Million People
Million People
90
85
80
75
70
65
60
0
1950
60
70
80
90
2000
10
20
30
40
50
60
2009 - 15 - 0829

Birthrates in Germany



- Germany spends large amounts of money on child benefits and parental leave
- Average number of children per woman = 1.4
- Which factors predict parenthood decisions?

Personality and Parenthood

- Cross-sectional association between personality traits and the number of children (e.g. Jokela, Alvergne, Pollet, & Lummaa, 2011)

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- Cross-sectional association between personality traits and the number of children (e.g. Jokela, Alvergne, Pollet, & Lummaa, 2011)

- Personality traits predict the probability of having children (e.g. Jokela, Hintsa, Hintsanen, & Keltikangas-Järvinen, 2010)

Costs and Benefits of Parenthood

- Conscientiousness
- Extraversion
- Low openness to experiences

⇨ Benefits

- Low conscientiousness
- Introversion (Miller, 1992)

⇨ Costs

"This is the perfect watch for mothers. Every day is 36 hours!"

Gap in the Literature

- Which mechanisms mediate the association between personality and parenthood decisions?

Gap in the Literature

- Which mechanisms mediate the association between personality and parenthood decisions?

- What is the role of the partner in parenthood decisions?
  - Actor- and Partner-Effects?

Research Questions

- Do one‘s own personality traits and those of the partner predict parenthood decisions?

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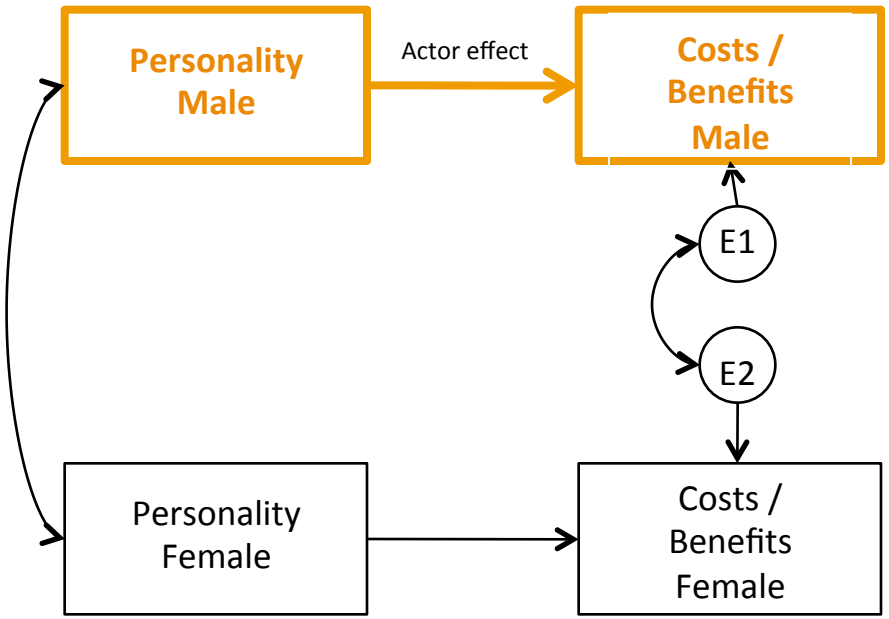
Research Questions

- Do one‘s own personality traits and those of the partner predict parenthood decisions?
- Is this association mediated by one’s own and one’s partner’s expected costs and benefits about parenthood and by one’s own and one’s partner’s intention to have children?
- Do these associations differ for the decision to have the first child versus to have an additional child?

Actor Partner Interdependence Model

Actor Partner Interdependence Model



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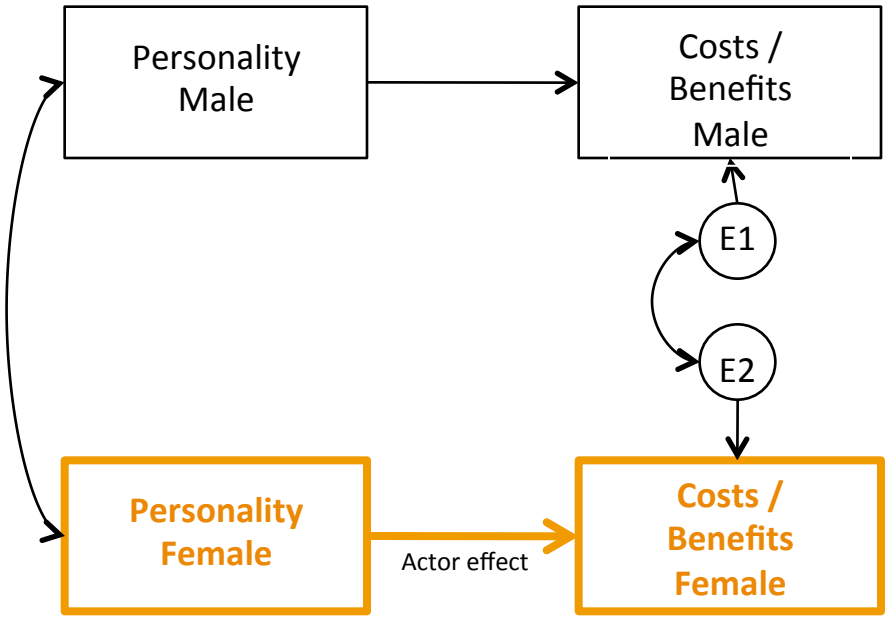

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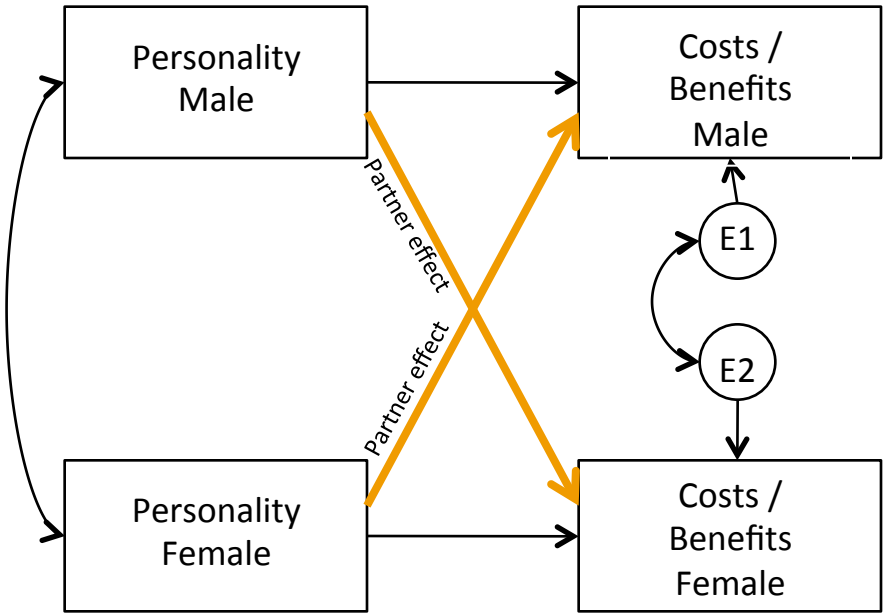

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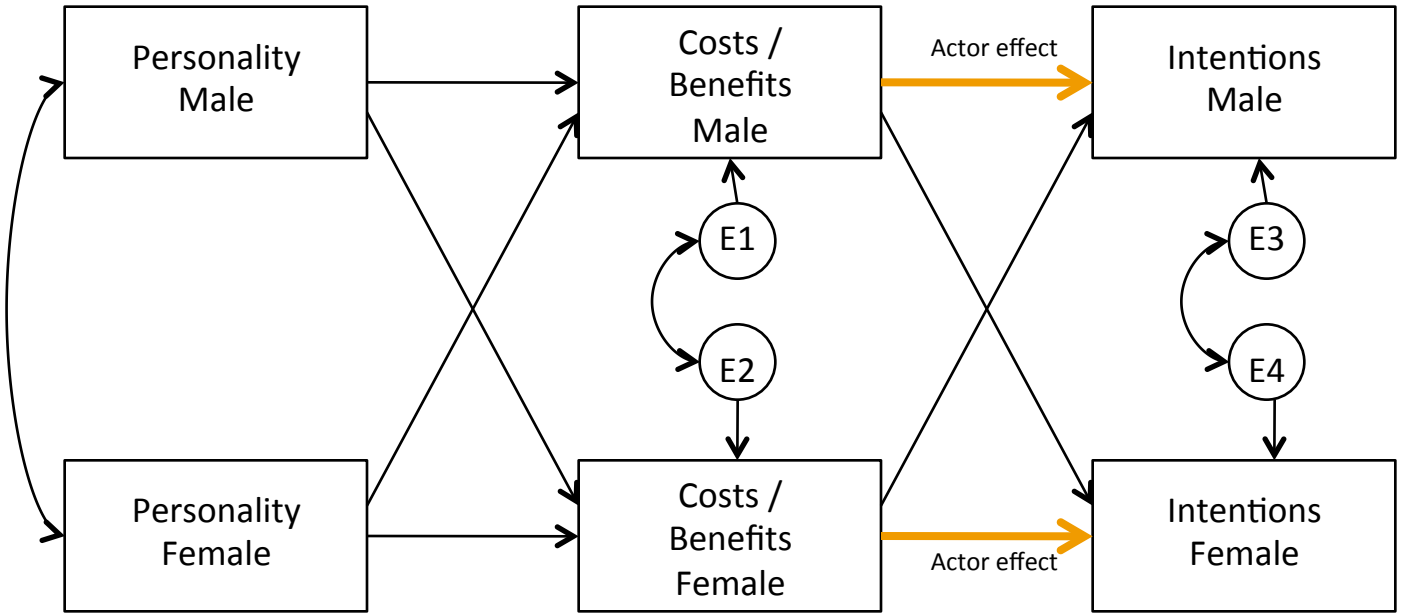

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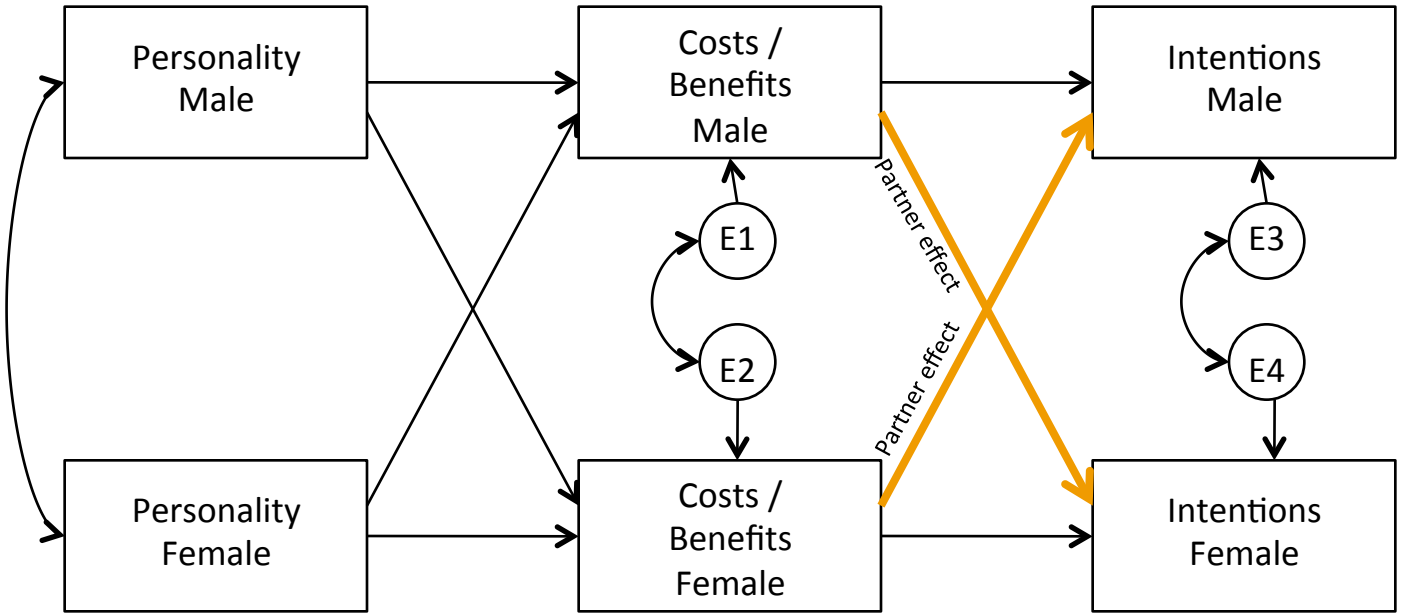

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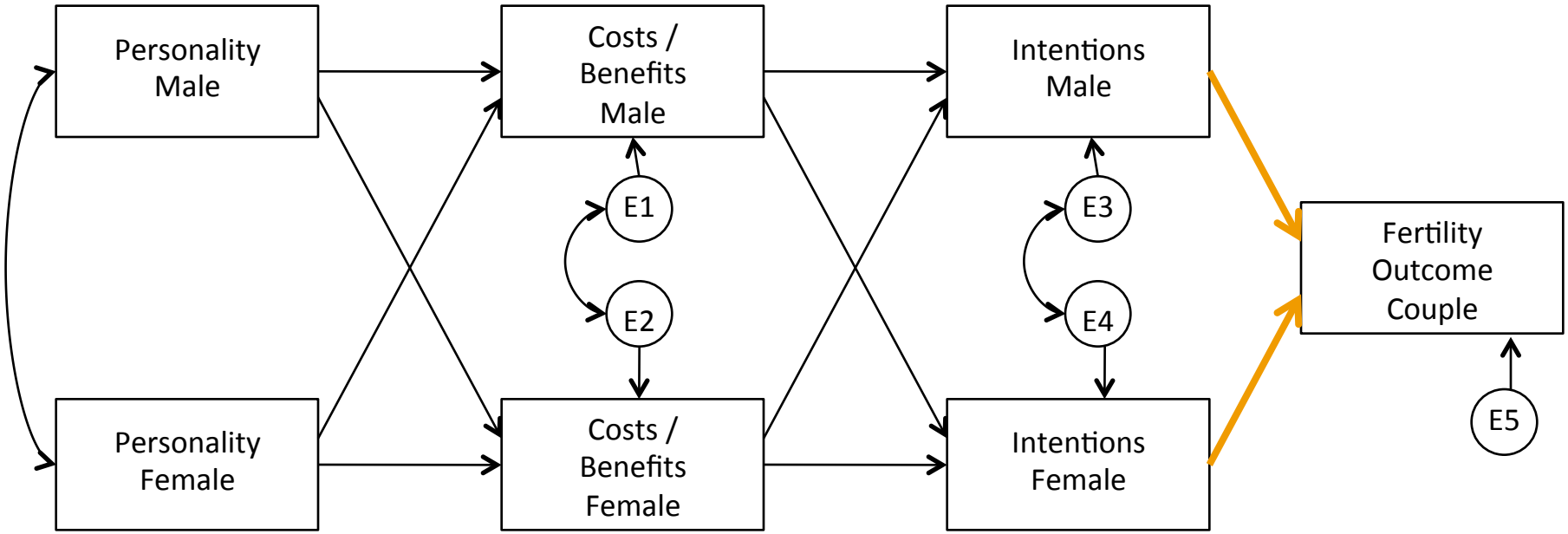

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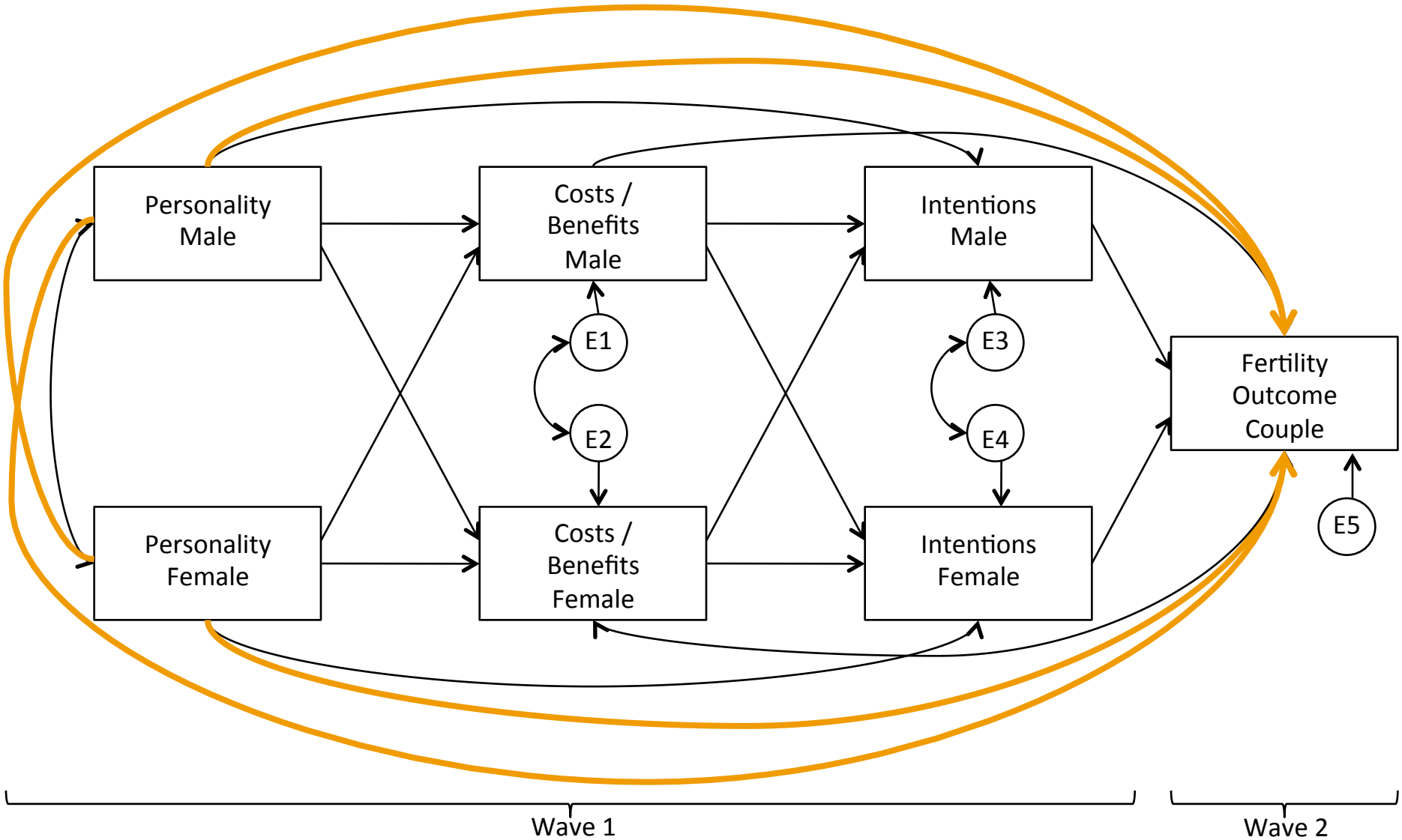

Method

Sample

- Panel Analysis of Intimate Relationships and Family Dynamics (pairfam)
- *N* = 2,482 couples
  - Heterosexual
  - Fertile
  - 15-17 cohort excluded
- 2 cohorts : 25-27 and 35-37 years old in Wave 1
- 2 waves: 2008-2009 (W1) and 2009-2010 (W2)

Method

Instruments

- Self-esteem $\alpha = .69$, Shyness $\alpha = .69$, Aggressiveness $\alpha = .80$

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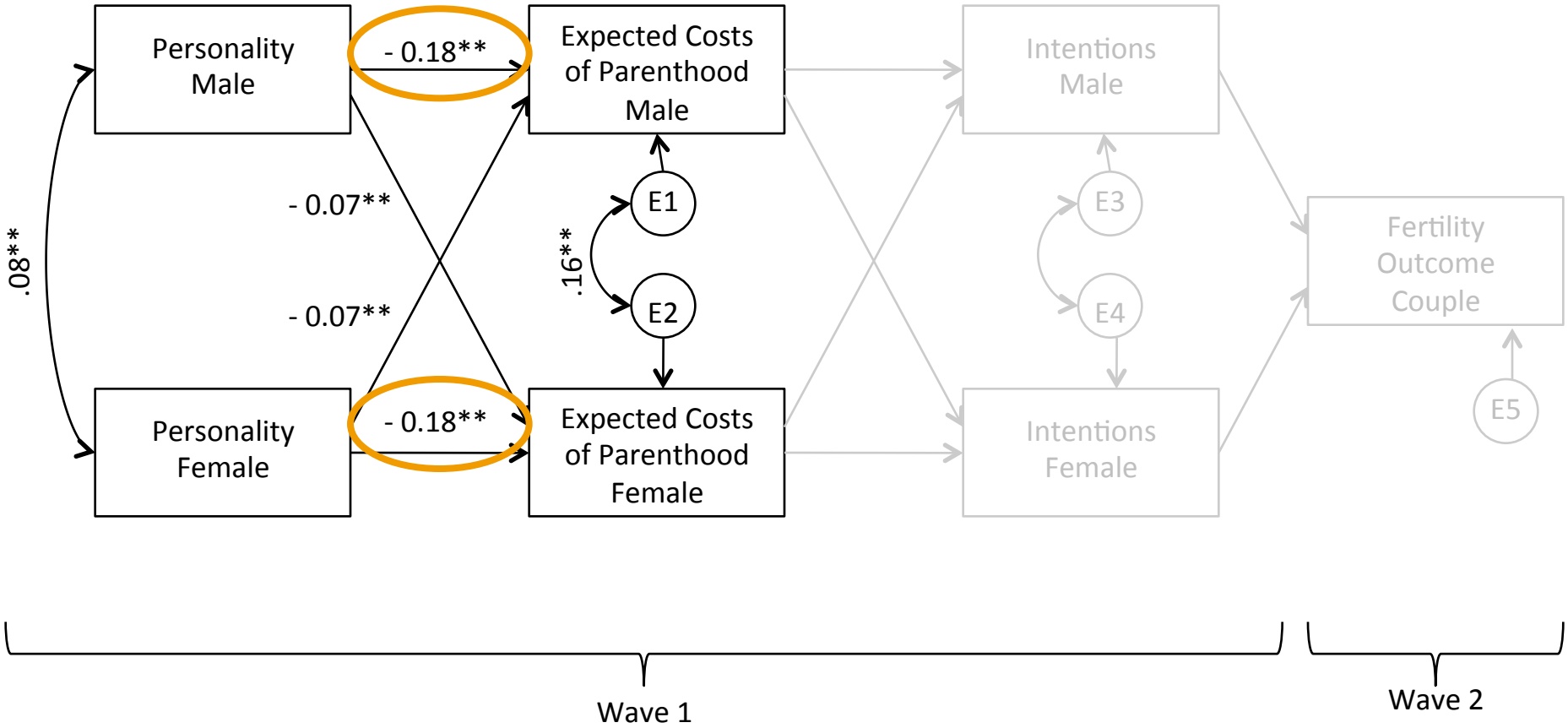
- Intention to have a(nother)child in the next 2 years (Walper et al., 2008)
- Parenthood decisions: Trying to become pregnant, pregnant or had a child
  - 1st child
  - Additional child

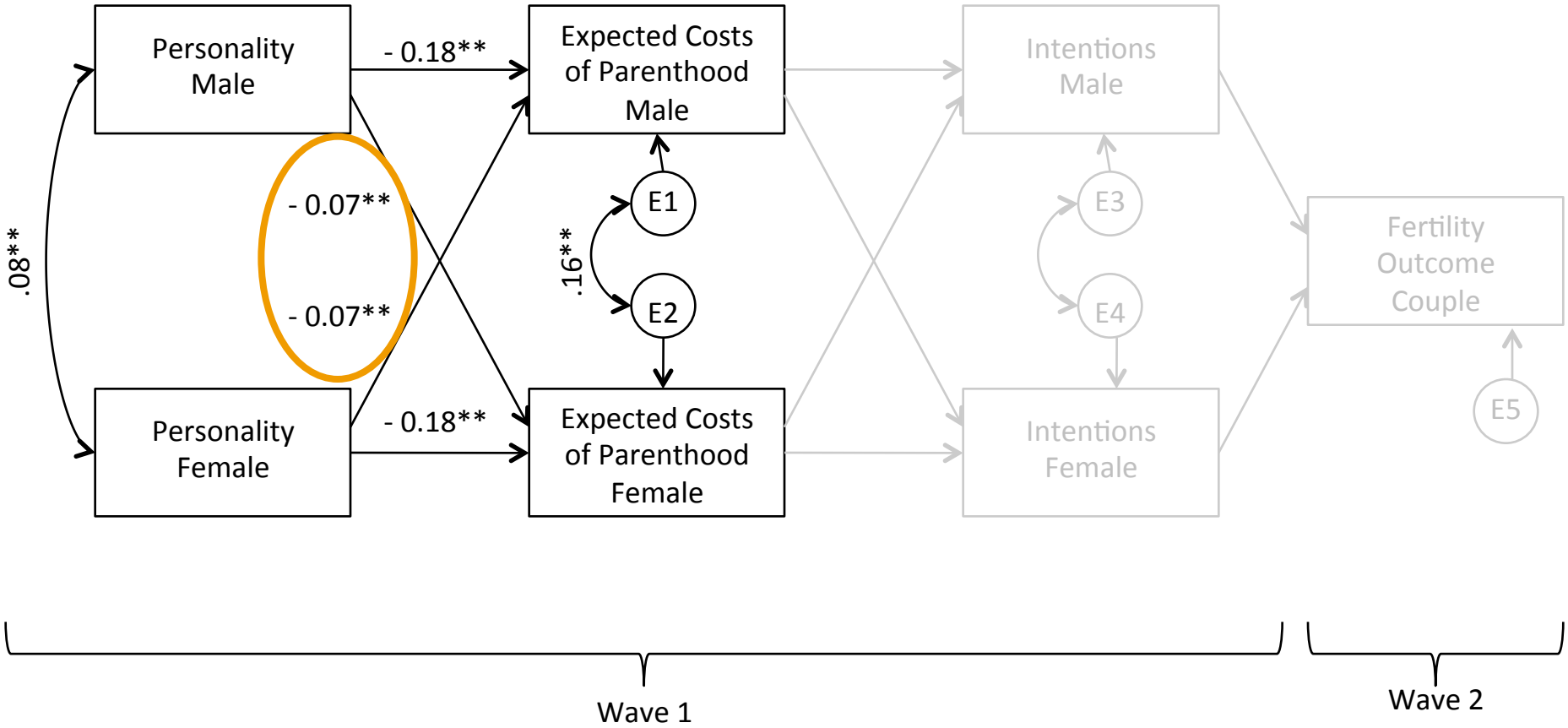
Results

Self-esteem



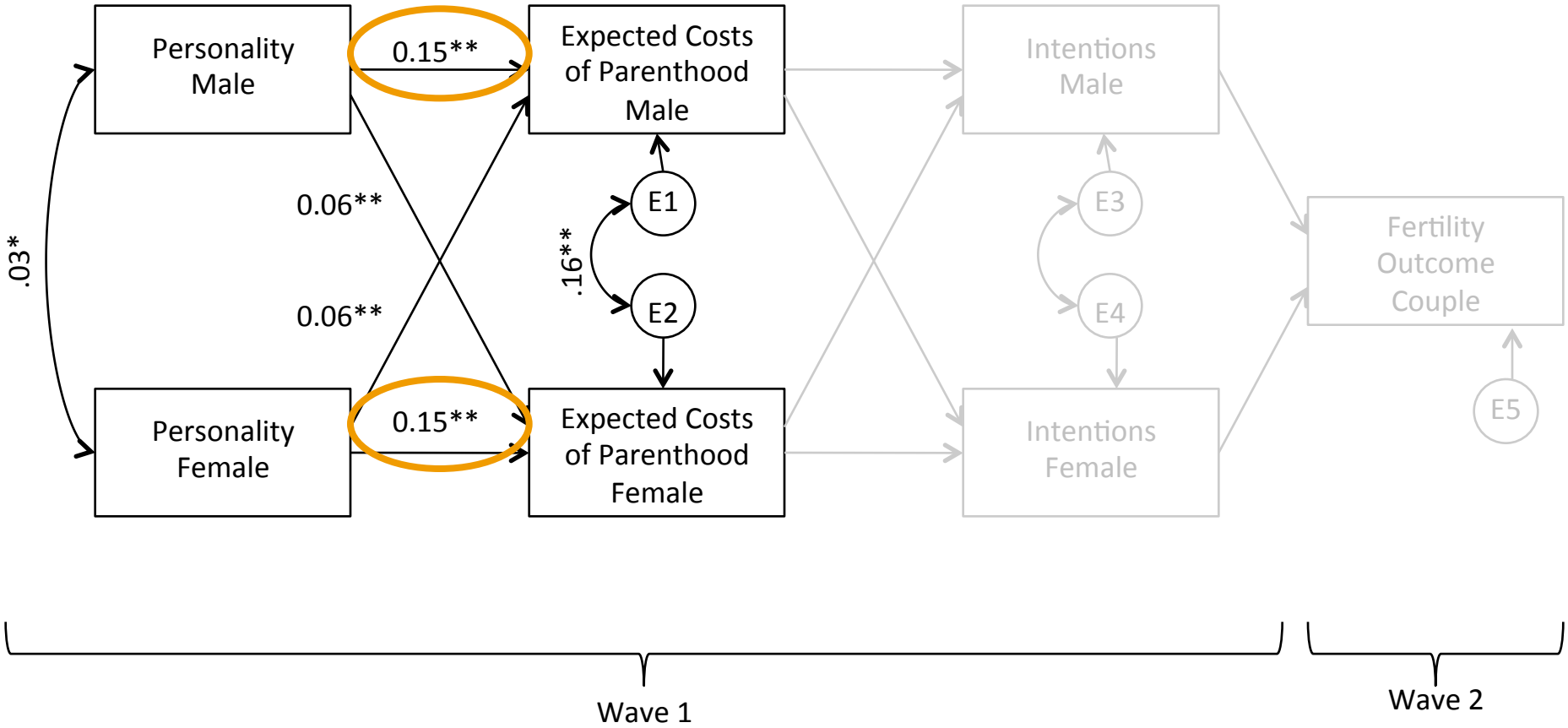
Results

Self-esteem



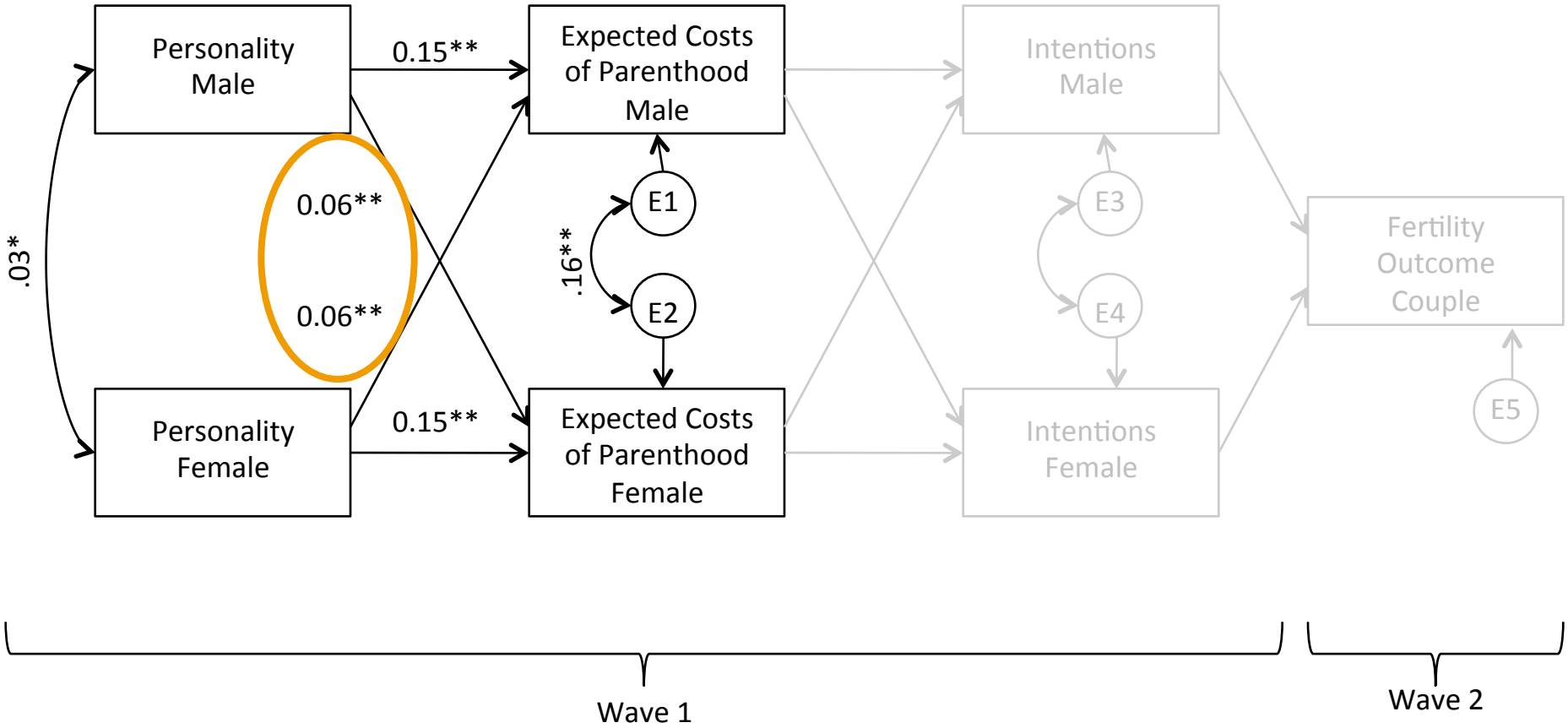
Results

Shyness



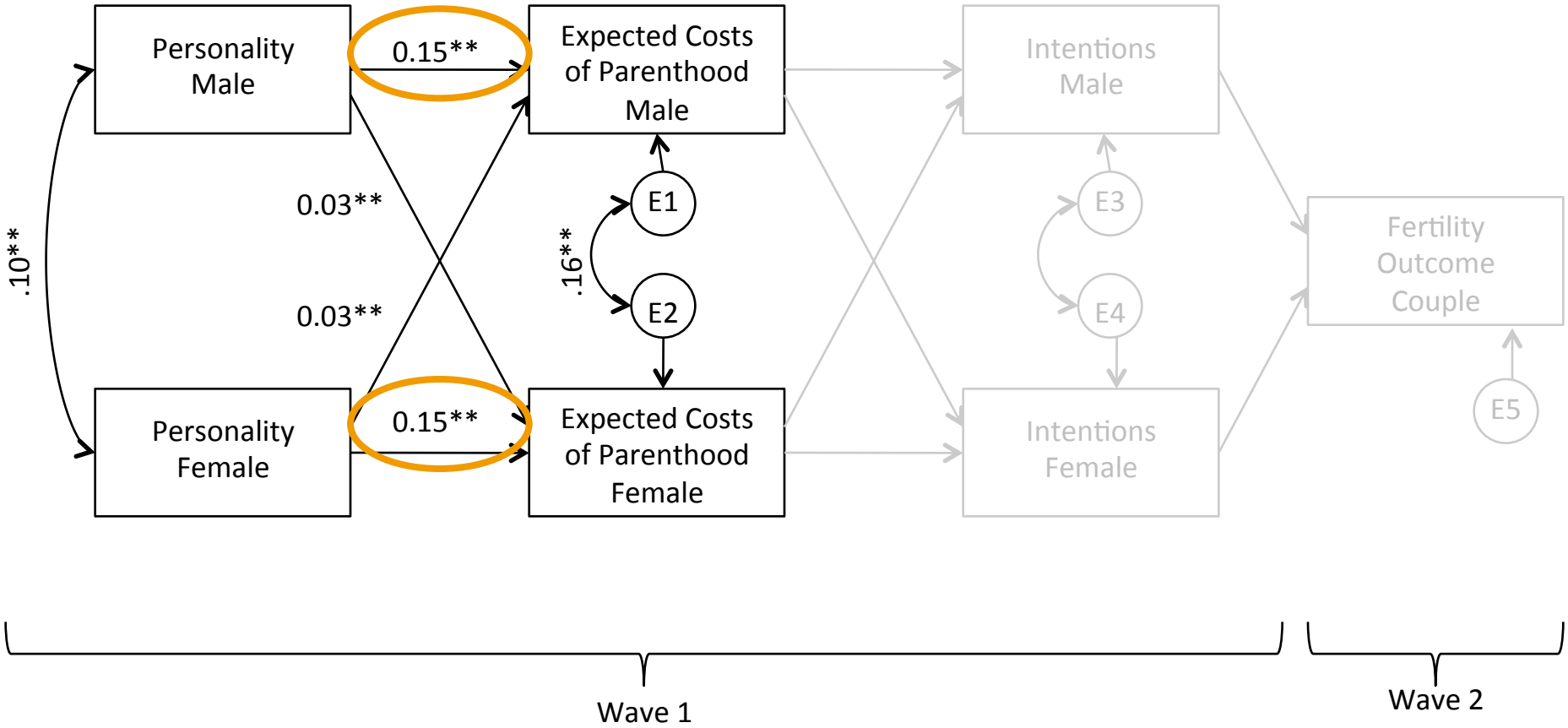
Results

Shyness



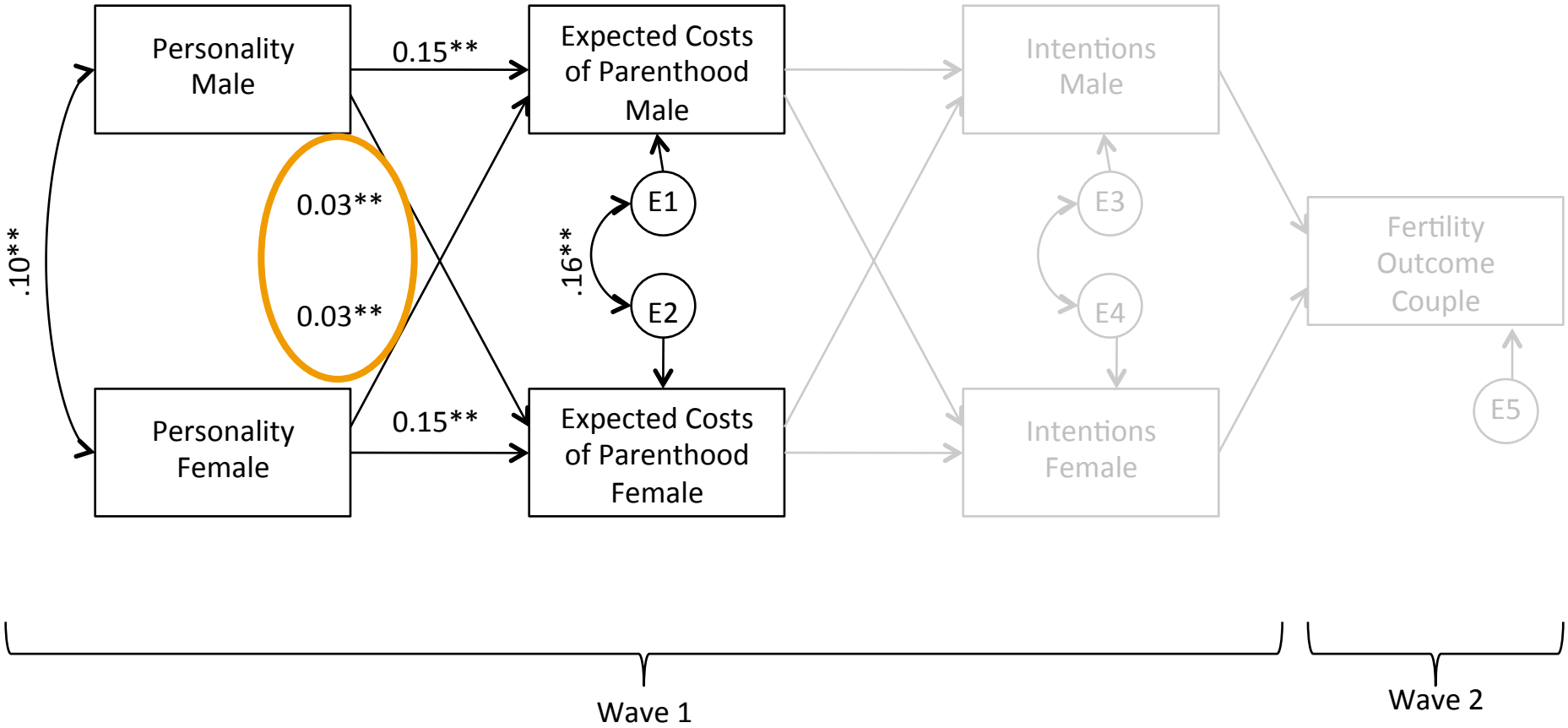
Results

Aggressiveness

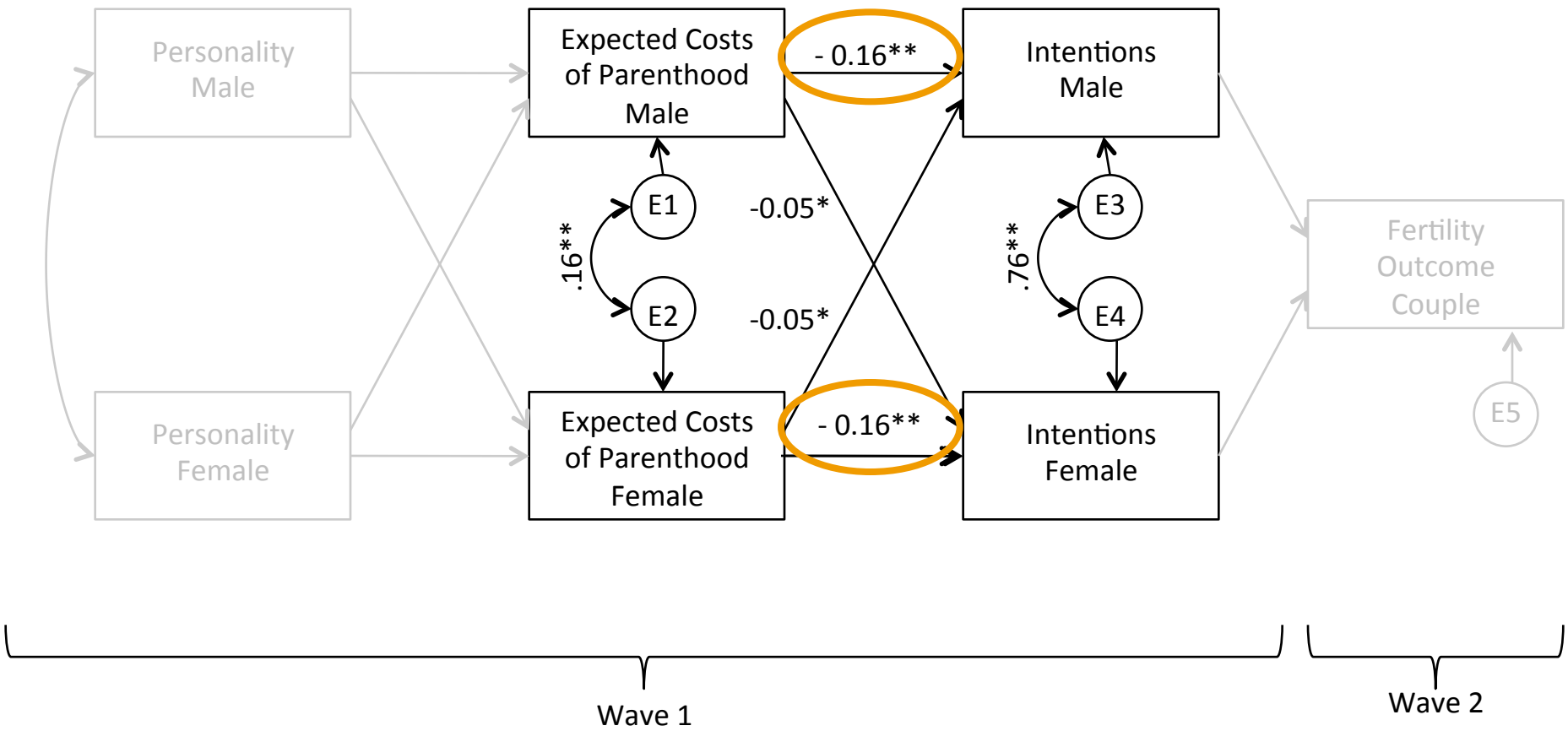


Results

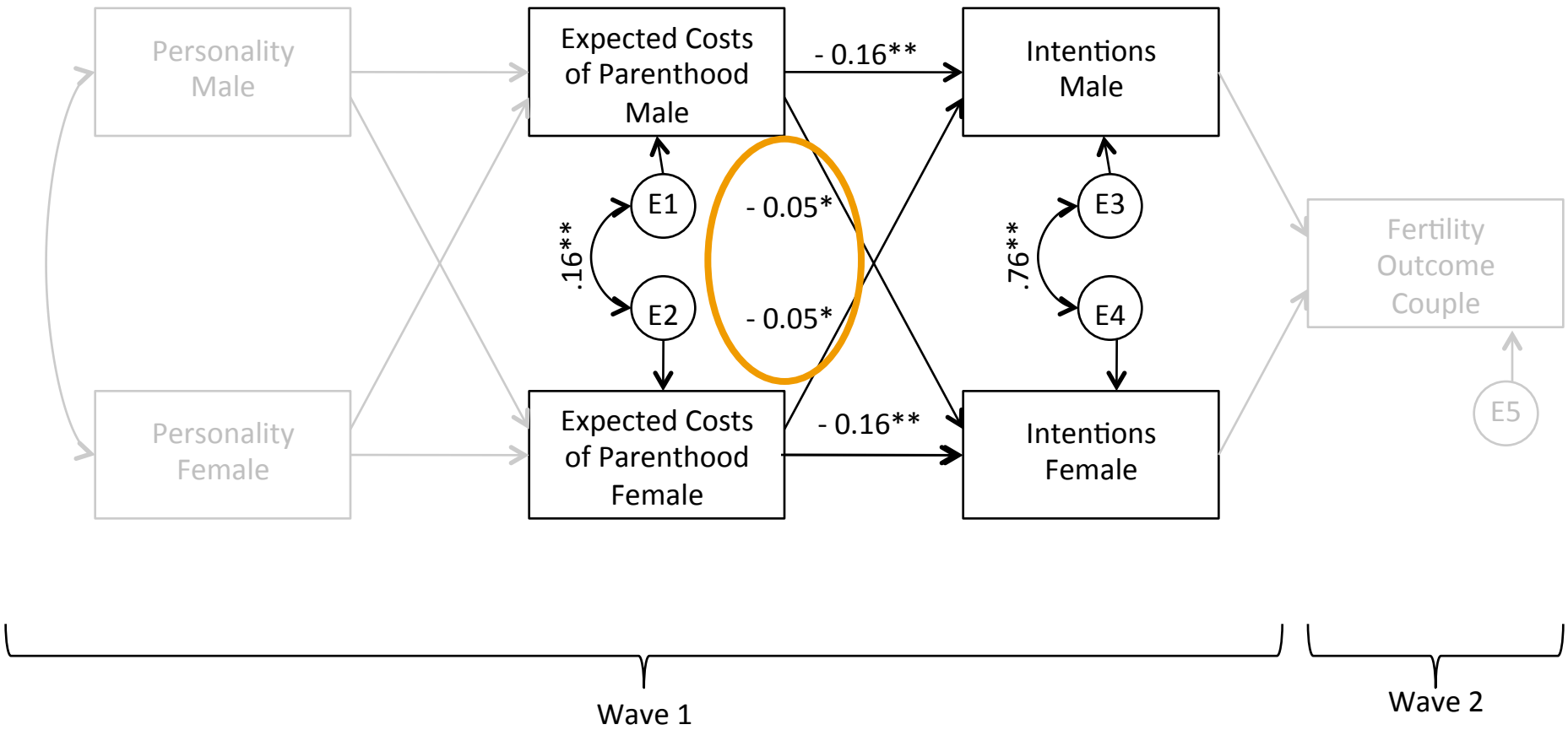
Aggressiveness



Results


Personality Male
Personality Female
Expected Costs of Parenthood Male
Expected Costs of Parenthood Female
Intentions Male
Intentions Female
Fertility Outcome Couple
E1
E2
E3
E4
E5
.16**
.76**
- 0.16**
- 0.16**
-0.05*
-0.05*
Wave 1
Wave 2

Results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- 0.16**
- 0.16**
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E2
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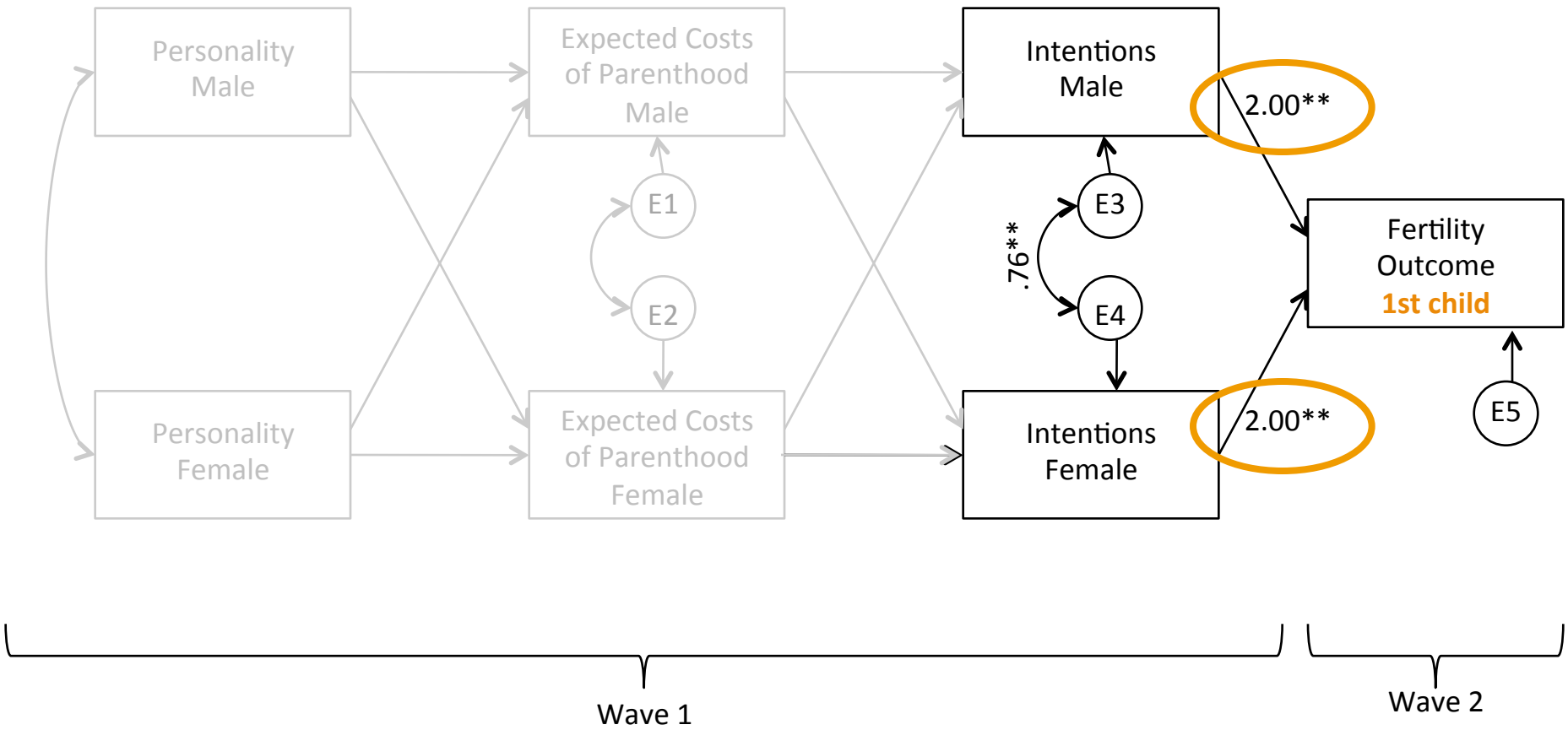
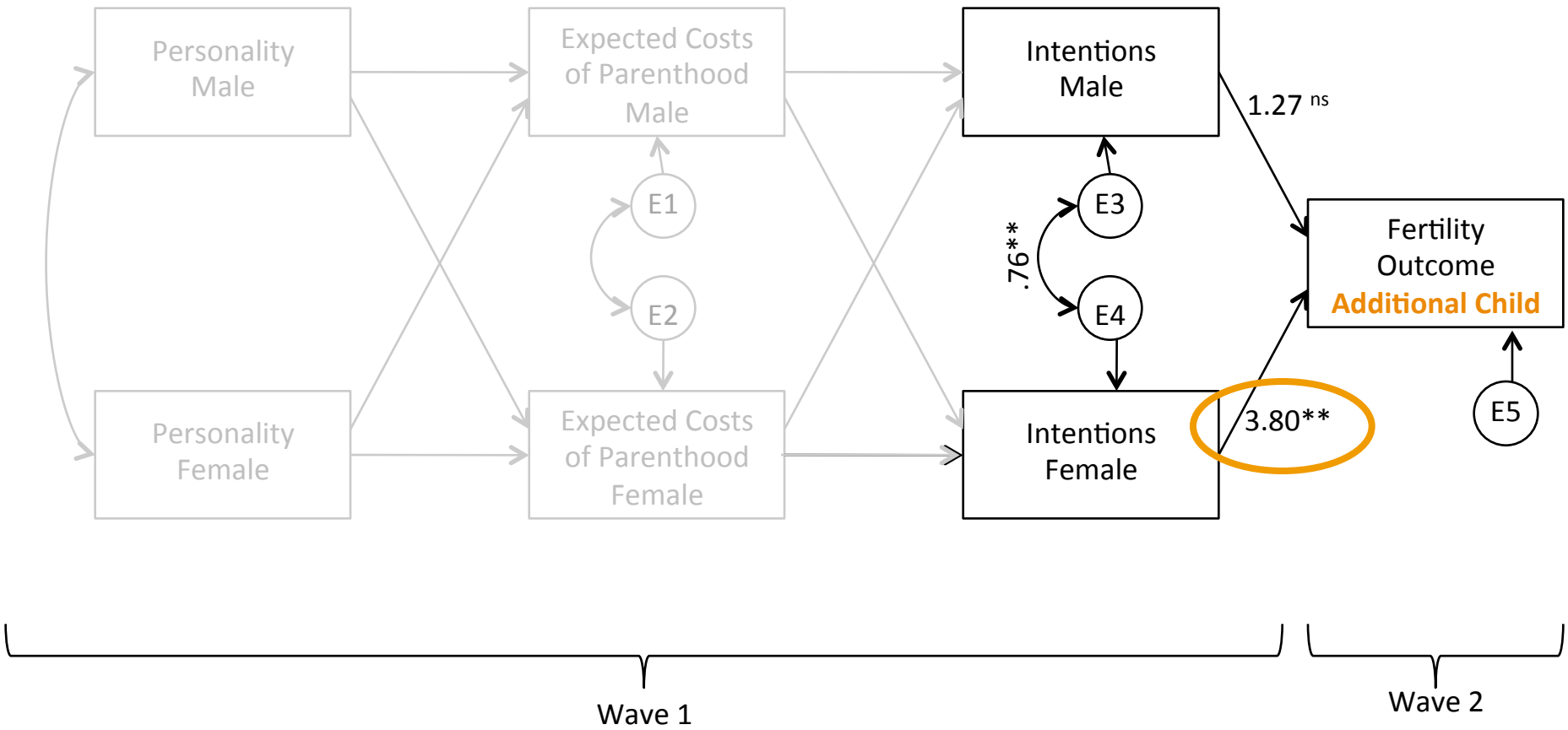
- 0.05*
E3
E4
.76**
Intentions Male
Intentions Female
Fertility Outcome Couple
E5
Wave 1
Wave 2

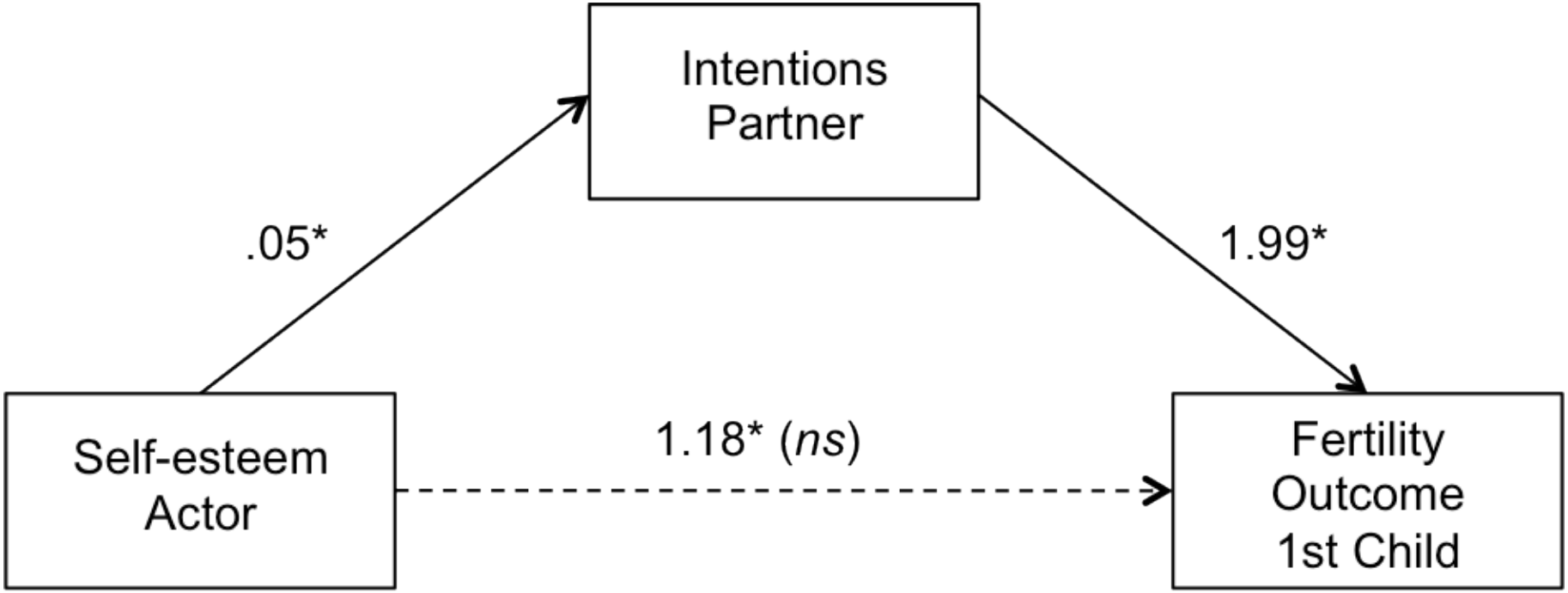
Results


Personality Male
Personality Female
Expected Costs of Parenthood Male
Expected Costs of Parenthood Female
E1
E2
Intentions Male
Intentions Female
E3
E4
.76**
2.00**
2.00**
Fertility Outcome
1st child
E5
Wave 1
Wave 2

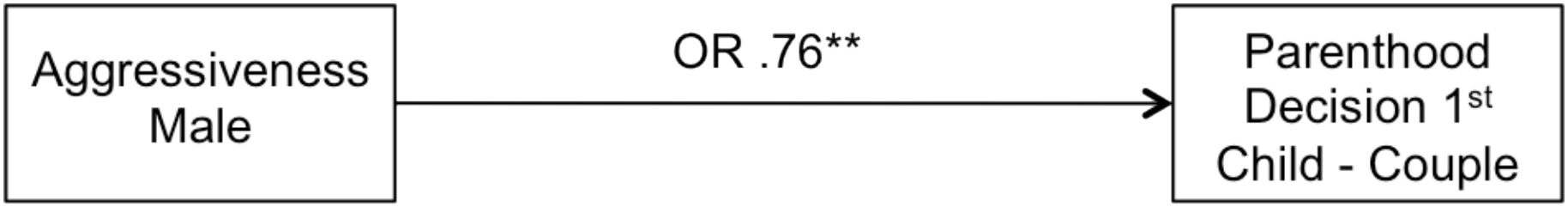
Results


Personality Male
Personality Female
Expected Costs of Parenthood Male
Expected Costs of Parenthood Female
E1
E2
Intentions Male
Intentions Female
E3
E4
.76**
1.27 ns
3.80**
Fertility Outcome
Additional Child
E5
Wave 1
Wave 2

Results


Intentions
Partner
.05*
1.99*
Self-esteem
Actor
1.18* (*ns*)
Fertility
Outcome
1st Child

Results


Aggressiveness Male
OR .76**
Parenthood Decision 1st Child - Couple

Summary

- Personality $\longleftrightarrow$ expected costs (Actor and Partner)

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- Expected costs $\overset{-}{\longleftrightarrow}$ intention (Actor and Partner)

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Summary

- Personality $\longleftrightarrow$ expected costs (Actor and Partner)
- Expected costs $\overset{-}{\longleftrightarrow}$ intention (Actor and Partner)
- Intention $\overset{+}{\longrightarrow}$ parenthood decision
- The self-esteem of both partners and the aggressiveness of the male predict parenthood decisions, but only for the first child
- The association between self-esteem and parenthood decision is mediated by the intention of the partner

Conclusion

- Personality plays an important role in the reproductive process

Conclusion

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  - Expected costs

Conclusion

- Personality plays an important role in the reproductive process
  - Expected costs
  - Intentions

Conclusion

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  - Actual behavior (for self-esteem and aggressiveness)

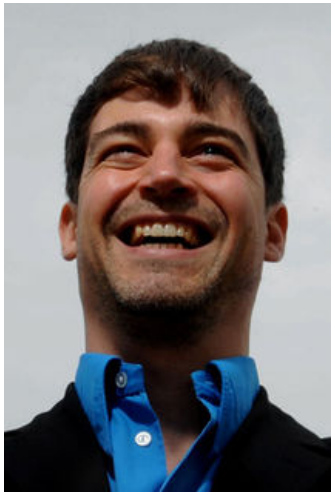
Conclusion

- Personality plays an important role in the reproductive process
  - Expected costs
  - Intentions
  - Actual behavior (for self-esteem and aggressiveness)
- The role of the partner in parenthood expected costs, intentions, and decisions should not be ignored

Thank you!

Contact: R.Hutteman@uu.nl

Hutteman, R., Bleidorn, W., Penke, L., & Denissen, J. J. A. (2013). It takes two: A longitudinal dyadic study on predictors of fertility outcomes. *Journal of Personality, 81,* 487-498.



Back-up

Items Value of Children

Living with children can have both pleasant and unpleasant aspects. I will now show you a list with some expectations that you may or may not associate with children. Please indicate how strongly you expect or worry the following things will occur as a result of having children.

•How strongly do you expect...

1.... that with children you will stay young longer?

2.... to have an especially close emotional relationship with your children?

3. ... that your standing in your social network will increase because of your children?

4.... that your adult children will be there for you when you are in need?

5. ... that you will get new ideas from your adult children?

•Let's now talk about the unpleasant aspects. How strongly do you worry...

1.... that you will be able to afford less with children?

2. ... that children will put you under nervous strain?

3.... that with children you will not accomplish your professional goals?

4.... that with children you will stand out in a negative way in public?

5.... that children will limit your personal freedom?

Not at all 1 2 3 4 5 Very strongly

Overview Parenthood Decisions

- Total *N* = 2,482
- Trying to become pregnant 1st child *N* = 66
- Trying to become pregnant again *N* = 48
- Pregnant with 1st child *N* = 43
- Pregnant with child again *N* = 61
- Had 1st child *N* = 66
- Became parents again *N* = 83
- Total parenthood decisions *N* = 342 couples (13.8%)
  - *N* = 159 for the first child (6.4%)
  - *N* = 183 for an additional child (7.4%)

Descriptives Table

Table 1 Means, Standard Deviations, and Zero-Order Correlations of all Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. SE ♂	—													
2. SE ♀	.13***	—												
3. Shy ♂	–.37***	–.07***	—											
4. Shy ♀	–.06***	–.44***	.05*	—										
5. Agg ♂	–.23***	–.08***	.15***	.04	—									
6. Agg ♀	–.07***	–.28***	.04*	.18***	.11***	—								
7. PE ♂	.09***	–.02	–.07***	.03	–.02	–.02	—							
8. PE ♀	.01	.09***	–.03	–.05*	–.004	–.05**	.23***	—						
9. NE ♂	–.19***	–.10***	.18***	.08***	.17***	.07***	–.09***	–.09**	—					
10. NE ♀	–.09***	–.18***	.07***	.15***	.04*	.20***	–.09***	–.02	.29***	—				
11. Inten ♂	.03	.07**	.002	–.02	–.02	–.06*	.002	.08**	–.13***	–.10***	—			
12. Inten ♀	.05*	.01	–.01	.04	–.01	–.01	.03	.01	–.08**	–.15***	.70***	—		
13. Dec 1st	.06*	.03	–.03	.03	–.06*	–.03	.03	.04	.01	–.02	.32***	.29***	—	
14. Dec add	.01	.05	–.01	–.003	.04	–.01	.02	.01	–.05	–.09**	.31***	.37***	.13***	—
M	4.15	3.93	2.07	2.21	2.27	2.52	3.49	3.49	2.17	2.34	2.77	2.78	159 (10.5)[1]	183 (12.1)
SD	.73	.85	.83	.89	.94	.99	.73	.69	.76	.84	1.01	1.06	—	—

Note. SE = Self-esteem; Shy = Shyness; Agg = Aggressiveness; PE = Positive expectations; NE = Negative expectations; Inten = Intentions; Dec 1st = Decision to have the first child; Dec add = Decision to have an additional child.

[1]Values for nominal variables refer to the frequency of having a value of 1, percentages between brackets.

*$p < .05$. **$p < .01$. ***$p < .001$.

Results Table 1

Table 2a Path Coefficients of the Longitudinal Actor Partner Interdependence Models (APIMs)

			Personality trait					
			Model 1: Self-esteem		Model 2: Shyness		Model 3: Aggressiveness	
Effect		Path	*B*	*SE*	*B*	*SE*	*B*	*SE*
Actor	a	Personality → NE	–.18***	.01	.15***	.01	.15***	.01
Partner	b	Personality → NE	–.07***	.01	.06***	.01	.03***	.01
Actor	a′	Personality → PE	.08***	.01	–.05***	.01	–.03**	.01
Partner	b′	Personality → PE	–.01	.01	.02[1]	.02	–.004	.01
					–.02[2]	.02		
Actor	c	NE → Intention	–.16***	.02	–.16***	.02	–.16***	.02
Partner	d	NE → Intention	–.05**	.02	–.07**	.02	–.06**	.02
Actor	c′	PE → Intention	.03	.02	.02	.03	.03	.03
Partner	d′	PE → Intention	.03	.03	.03	.03	.03	.03
Actor	e	Personality → Intention	–.002	.02	.05*	.02	.02	.02
Partner	f	Personality → Intention	.05*	.02	.02	.02	–.05*[1]	.02
							.02[2]	.02
	g	Personality ♂ ↔ Personality ♀	.08***	.01	.03*	.01	.10***	.02
	h	NE ♂ ↔ NE ♀	.16***	.01	.17***	.01	.17***	.01
	h′	PE ♂ ↔ PE ♀	.12***	.01	.11***	.01	.11***	.01
	i	Intention ♂ ↔ Intention ♀	.75***	.03	.75***	.03	.76***	.03

Note: $N = 2{,}482$ for all models. NE = negative expectations; PE = positive expectations. Columns contain path coefficients from three separate APIMs (i.e., for self-esteem, shyness, and aggressiveness separately). Prime symbol (′) refers to positive expectations.
[1]Path from female variable to male variable. [2]Path from male variable to female variable.
*$p < .05$. **$p < .01$. ***$p < .001$.

Results Table II

Table 2b Odds Ratios for Associations With Fertility Outcomes Within the Longitudinal Actor Partner Interdependence Models (APIMs)

		Personality trait					
		Model 1: OR Self-esteem		Model 2: OR Shyness		Model 3: OR Aggressiveness	
	Path	First child	Additional child	First child	Additional child	First child	Additional child
j	Personality → Fertility outcome	1.17†	1.02	.98	.99	.76***[1] .99[2]	1.10
k	Negative expectations → Fertility outcome	1.16†	.88	1.13	.88	1.16†	.85*
k′	Positive expectations → Fertility outcome	1.07	1.01	1.08	1.00	1.07	1.00
l	Intention → Fertility outcome	2.00***	1.27[1] 3.80***[2]	2.01***	1.28[1] 3.73***[2]	2.01***	1.27[1] 3.84***[2]

Note: $N = 2{,}482$ for all models. Columns contain path coefficients from three separate APIMs (i.e., for self-esteem, shyness, and aggressiveness separately). Prime symbol (′) refers to positive expectations.
[1]Path from male variable. [2]Path from female variable.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.