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

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European Birth Rate Declines

The natural increase in Europe's population is slowing and may start a steep decline over the next few decades, researchers say.

Researchers writing in the journal *Science* said European population growth may have peaked in the late 1990s, and that the number of people born in Europe is now less than the number dying. The trend in some parts of Europe is for the population to fall, and the decline is expected to continue for the next two generations.

In effect, the authors say, the momentum for population growth in the 15-24 age group is now negative, and the trend could strongly influence population projections for the 21st century.

U.S. Birth Rate Hits All-Time Low

Tech birth rate also falls to record low.

By Robert Longley, About.com Guide

Continuing a 12-year decline, the U.S. birth rate has dropped to a level not seen in almost 50 years, according to statistics just released (CDC). The rate of births among teenagers also fell to a new low in 2010.

The birth rate fell to 3.9 per 1,000 persons in 2010, down from a peak of 4.1 in 1990. The rate of births among teenagers also fell to a new low in 2010.

The EU's baby blues

In an article for the BBC News website, Clare Murphy of the European Commission says that the EU's birth rate is falling fast.

The EU's birth rate is falling fast, and the trend is expected to continue for the next few decades. The EU's birth rate is falling faster than the world average, and the trend is expected to continue for the next few decades.

Why Won't Germans Have More Babies?

Chancellor Angela Merkel's government has pumped billions into the economy to encourage more babies, but they say it is not enough. The German government has been criticized for not doing enough to encourage more babies, but it is not clear what more could be done.

A Land Without Children: Why Won't Germans Have More Babies?

The German government has been criticized for not doing enough to encourage more babies, but it is not clear what more could be done.
(Estimated) Population Development in Germany between 1950 and 2060
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?

Benefits for parental leave in € bln.

- 2007: 1.71
- 2008: 683
- 2009: 665
- 2010: 678

Births in thousands

Sources: German Family Ministry, Federal Statistical Office
Personality and Parenthood

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

• 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

Costs

(Miller, 1992)

“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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• 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?
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

Personality
Male

Actor effect

Costs / Benefits
Male

E1

E2

Personality
Female

Costs / Benefits
Female
Actor Partner Interdependence Model

Personality Male ➔ Costs / Benefits Male ➔ E1 ➔ Costs / Benefits Female ➔ Actor effect ➔ Personality Female

E2 ➔ Costs / Benefits Male ➔ E1

Actor Partner Interdependence Model
Actor Partner Interdependence Model

Personality Male

Costs / Benefits Male

E1

E2

Costs / Benefits Female

Personality Female

Partner effect

Partner effect
Actor Partner Interdependence Model

Personality Male

Costs / Benefits Male

E1

E2

Intentions Male

Personality Female

Costs / Benefits Female

E3

E4

Intentions Female
Actor Partner Interdependence Model
Actor Partner Interdependence Model

- Personality Male
- Personality Female
- Costs / Benefits Male
- Costs / Benefits Female
- Intentions Male
- Intentions Female
- Fertility Outcome Couple
Actor Partner Interdependence Model

- Personality Male
- Costs / Benefits Male
- Intentions Male
- Personality Female
- Costs / Benefits Female
- Intentions Female
- Fertility Outcome Couple

Wave 1
Wave 2

E1, E2, E3, E4, E5
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 $\alpha = .80$
Method

Instruments

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

• Expected costs and benefits of parenthood (VOC; Fitzner et al. 2007)
  – Expected benefits ($\alpha = .65$)
  – Expected costs ($\alpha = .77$)
Method

Instruments

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

• Expected costs and benefits of parenthood (VOC; Fitzner et al. 2007)
  – Expected benefits ($\alpha = .65$)
  – Expected costs ($\alpha = .77$)

• Intention to have a(nother) child in the next 2 years (Walper et al., 2008)
Method

Instruments

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

• Expected costs and benefits of parenthood (VOC; Fitzner et al. 2007)
  – Expected benefits ($\alpha = .65$)
  – Expected costs ($\alpha = .77$)

• 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

Personality Male

- 0.18**

Expected Costs of Parenthood Male

- 0.07**

Personality Female

- 0.18**

Expected Costs of Parenthood Female

.08**

Inten$ons Male

Wave 1

Intensity Female

Wave 2

Fer$ility Outcome Couple

E1

E2

E3

E4

E5
Results

Self-esteem

-0.18**

Expected Costs of Parenthood Male

-0.18**

Expected Costs of Parenthood Female

-0.07**

Personality Male

-0.07**

Personality Female

0.08**

0.16**

Waves 1 and 2

Intentions Male

Expectations E1, E2, E3, E4, E5

Fertility Outcome Couple

Self-esteem

**Significant at the 0.05 level
Results

Shyness

- Personality Male
- Expected Costs of Parenthood Male
- Expected Costs of Parenthood Female
- Inten$ons Male
- Inten$ons Female
- Fertility Outcome Couple

Wave 1
- E1
- E2
- E3
- E4

Wave 2
- E5

Significance Levels:
- **p < 0.01
- *p < 0.05
Results

Shyness

Personality Male

Expected Costs of Parenthood Male

0.15**

Personality Female

Expected Costs of Parenthood Female

0.06**

0.06**

Intentions Male

Fertility Outcome Couple

Intentions Female

.03*

.16**

Wave 1

Wave 2
Results

Aggressiveness

- Personality Male
- Expected Costs of Parenthood Male
- Intentions Male
- Fertility Outcome Couple

- Personality Female
- Expected Costs of Parenthood Female
- Intentions Female

- E1
- E2
- E3
- E4
- E5

Wave 1

- Wave 2

Significant correlations:
- 0.15**
- 0.03**
- 0.10**
- 0.16**
Results

Aggressiveness

Personality Male

Personality Female

Expected Costs of Parenthood Male

Expected Costs of Parenthood Female

Intentions Male

Intentions Female

Fertility Outcome Couple

Results

Aggressiveness

0.15**

0.03**

0.03**

0.15**

0.16**

0.10**

Wave 1

Wave 2
Results

Personality Male

Personality Female

Expected Costs of Parenthood Male

-0.16**

Expected Costs of Parenthood Female

-0.16**

Intentions Male

E1

E2

-0.05*

-0.05*

E3

E4

Fertility Outcome Couple

E5

Wave 1

Wave 2

Inten$ons

Male

-0.16**

Inten$ons

Female

0.16**

0.76**
Results

Personality Male

Expected Costs of Parenthood Male

E1

E2

Personality Female

Expected Costs of Parenthood Female

E3

E4

Intentions Male

2.00**

Fertility Outcome
1st child

Intentions Female

2.00**

E5

Wave 1

Wave 2
Results

- Expected Costs of Parenthood
  - Male
  - Female

- Intentions
  - Male
  - Female

- Fertility
  - Outcome
  - Additional Child

Additional Child:
- Wave 1: 1.27 ns
- Wave 2: 3.80**
Results

Intentions Partner

Self-esteem Actor

Fertility Outcome 1st Child

.05*

1.18* (ns)

1.99*
Results

Aggressiveness Male \( \text{OR} .76^{**} \) Parenthood Decision 1\(^{st}\) Child - Couple
Summary

• Personality $\leftrightarrow$ expected costs (Actor and Partner)
Summary

• Personality $\leftrightarrow$ expected costs (Actor and Partner)

• Expected costs $\leftrightarrow$ intention (Actor and Partner)
Summary

• Personality $\leftrightarrow$ expected costs (Actor and Partner)

• Expected costs $\leftrightarrow$ intention (Actor and Partner)

• Intention $\rightarrow$ parenthood decision
Summary

• Personality $\leftrightarrow$ expected costs (Actor and Partner)

• Expected costs $\leftarrow$ intention (Actor and Partner)

• Intention $\rightarrow$ parenthood decision

• The self-esteem of both partners and the aggressiveness of the male predict parenthood decisions, but only for the first child
Summary

- Personality $\leftrightarrow$ expected costs (Actor and Partner)
- Expected costs $\leftrightarrow$ intention (Actor and Partner)
- Intention $\rightarrow$ 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

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

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

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

Back-up
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

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<td>$.04*</td>
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</table>
| $M$ | 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.

$^*_p < .05$, $^{**}p < .01$, $^{***}p < .001$. 
Table 2a Path Coefficients of the Longitudinal Actor Partner Interdependence Models (APIMs)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Path</th>
<th>Model 1: Self-esteem</th>
<th>Model 2: Shyness</th>
<th>Model 3: Aggressiveness</th>
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<td>.17***</td>
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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.

Path from female variable to male variable. Path from male variable to female variable.

*p < .05. **p < .01. ***p < .001.
## Table 2b: Odds Ratios for Associations With Fertility Outcomes Within the Longitudinal Actor Partner Interdependence Models (APIMs)

<table>
<thead>
<tr>
<th>Path</th>
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<th>Model 2: OR Shyness</th>
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</tbody>
</table>

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.

†Path from male variable. ‡Path from female variable.

*p < .10, *p < .05, **p < .01, ***p < .001.