Emotion and Fertility Intentions in Times of Disaster: Conceptualizing Fertility Responses to the COVID-19 Pandemic and Beyond

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Fertility Response to Disasters

Percent change in the crude birth rate in January 2020 to July 2021 compared with the rate in the same month in the previous year

- Germany
- Finland
- France
- Italy
- Netherlands
- Spain
- USA
- Portugal

Why does it vary?
Which factors drive the disaster impact on fertility preferences and behavior?

Source: STFF Database, own calculations
Replacement-, Physiological-, Insurance- & Hoarding:

- Mortality of own child or expectations of future mortality trigger childbearing (Lloyd and Ivanov 1988; Nobles 2016; Nobles, Frankenberg, and Thomas 2015)

(Economic) Uncertainty:

- Unemployment, increased job insecurity, and reduced income affect childbearing-decisions (Ayllón 2019; Kreyenfeld 2016; Sobotka et al. 2011; Vignoli, Mencarini, and Alderotti 2020)

Rapid Attitudinal and Cultural Change:

- Sociopolitical shocks (e.g. break down of Soviet Union) and community level disasters (e.g. Oklahoma bombing) lead to value shifts which affect childbearing (Conrad, Lechner and Werner 1996; Rodgers, John and Coleman 2005)
Main Hypothesis:

• **What happens** (e.g. disaster) affects fertility preferences and behaviors systematically via being *channeled* through *how people feel about* it.

• Role of psychological factors more salient during crises: *Uncertainty increases importance of affect in decision-making* (Faraji-Rad and Pham 2017)
Terror management theory:

• Feelings of existential terror & death awareness are managed via seeking closeness to others, and by pursuing (first or continued) parenthood to create sense of comfort and immortality (Solomon 2019; Solomon, Greenberg, and Pyszczynski 2000)

Uncertainty intolerance and worry approach:

• Whether individuals worry about the future in ‘uncertain’ circumstances is contingent on their uncertainty tolerance (Dugas, Gosselin and Ladouceru 2001, Miceli and Castelfranchi 2005, Buhr and Duas 2009)

• In extension, not uncertainty per se but perceived uncertainty and worry reduce childbearing desires & intentions and fertility

Fertility Response to Disasters: Shift Focus to Psychological Factors & Approaches
Research Question

Are anxiety, anger, loneliness and worries about health and finances felt during the first Covid-19 wave associated with changes in fertility preferences?
Hypotheses & Measures

**TM: Terror Management**

*General fear and negative emotion* (anxiety, loneliness, anger) and *health worries* triggered by ‘threat’ will *intensify desire to reproduce*

General anxiety, loneliness, threat to health perception ↑ fertility (desires/intentions)

**UM: Uncertainty Perception Model**

*Worries related to economic conditions, health & social stability* will lead to *decline* in fertility desires / intentions / conceptions

Specific worry and anxiety about economic situation, health, social stability ↓ fertility (desires/intentions)
## Data

**Pairfam**: Panel Analysis of Intimate Relationships and Family Dynamics

<table>
<thead>
<tr>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
<th>Wave 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partner</strong> (N=3,743)</td>
<td><strong>Partner</strong> (N=2,988)</td>
<td><strong>Partner</strong> (N=2,362)</td>
<td><strong>Partner</strong> (N=2,182)</td>
</tr>
<tr>
<td><strong>Anchor</strong> (N=12,402)</td>
<td><strong>Anchor</strong> (N=9,069)</td>
<td><strong>Anchor</strong> (N=7,901)</td>
<td><strong>Anchor</strong> (N=6,999)</td>
</tr>
<tr>
<td><strong>Children</strong> (N=582)</td>
<td><strong>Children</strong> (N=987)</td>
<td><strong>Children</strong> (N=1,084)</td>
<td></td>
</tr>
<tr>
<td><strong>Parents</strong> (N=5,015)</td>
<td><strong>Parents</strong> (N=3,945)</td>
<td><strong>Parents</strong> (N=3,350)</td>
<td></td>
</tr>
</tbody>
</table>

Wave 1: 2008/09
Wave 2: 2009/10
Wave 3: 2010/11
Wave 4: 2011/12
Data Collection Timing

Wave 12 / 2019-2020

Wave 12 collected Nov 2019 – March 2020

First Lockdown in Germany ca. March 15th 2020

Extra Wave COVID March-May 2020

N=704

Wave 12 finalized May-July 2020
Dependent Measure and Model

“Disregarding constraints, how many kids would you ideally like to have?” (coded as 0-4+)

Outcome Variable:
Change in fertility desires from wave 11 (2018/19) to wave 12 (late spring/summer 2020)

Multinomial model: 1) stayed the same, 2) increased, 3) decreased

Control variables: age, education, sex, partnered, parenthood status
Measures: Emotion

Have you felt over the past 4 weeks...

- Anxious
- Angry
- Lonely

Percentage

Row Count Totals

Emotion intensity:

1: Not at all
2
3
4
5: Absolutely

1 1 1
Measures: Worries

How are you worried about...

Financial

Health..Own

Health..Relatives

Percentage

Not worried Somewhat worried Very worried Worries level

Row Count Totals
Results: TM / Loneliness
Results: TM / Loneliness
Results: **TM / Anxiety, Anger**

**Anxious**

- Decrease: -0.02
- Increase: 0.23 *

**Angry**

- Decrease: -0.00
- Increase: 0.27 *
Results: **TM ✓** / Anxiety, Anger
Results: TM + UM / Relatives’ Health Worries
Results: TM ✓ + UM/ Relatives’ Health Worries
Results: **TM + UM** / Own Health Worries
Results: TM + UM ✓ / Own Health Worries
Results: UM / Financial Worries
Results: **UM ✓** / Financial Worries

![Graph showing financial worry with and without controls](image-url)
Conclusions

- Psychological pathways may underlie disaster-fertility-preference relationship
- Terror Management ✓ (anxiety, anger, relatives’ health worry)
- Terror Management (loneliness, own health worry)
- Perceived Uncertainty Model ✓ (financial & own health worry)
Limitations and Discussion

• Analyses are exploratory, simple, lack statistical power
• Unobserved heterogeneity? Personality? Life circumstances? Moderators (individuals, couples, culture)?
• Findings unique to disaster moments?
• We don’t examine fertility behavior--preference implementation may be affected by disaster itself

• What does it all mean for fertility change in times of disaster?
• Does emotion distribution predict (short or longer term) shifts in preferences, or actual change in fertility in disaster times?
  ➢ Promising avenue for future research
Thank you!

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