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# **The Impact of Children on Parental Happiness: Unraveling Gender, Education, and Economic Dynamics**

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3. Description: Variables of Interest
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## Section 1

# Research Question & Hypothesis

# Do Children Make People Happy?

## **Complex Dynamics**

Previous research indicates that while children generally increase happiness, individual characteristics such as age at parenthood, socioeconomic status, and gender influence the happiness trajectory of parents.

# Literature Review

## **Research on the relationship between children and parental happiness reveals complex dynamics:**

- Angeles (Angeles, 2010) found that while children generally increase happiness, this effect is contingent on individual characteristics.
- Musick (Musick et al., 2016) further explored this, noting that parents report greater well-being in activities with children, but mothers experience more stress and fatigue.
- The happiness trajectory of parents may vary by age at parenthood, socioeconomic status, and gender. Those who have children at older ages or who have more education have a particularly positive happiness response to a first birth (Myrskylä & Margolis, 2014).
- Women with more social and economic resources have less steep post-birth dips in life satisfaction than those with fewer resources (Myrskylä & Margolis, 2014).

**These studies collectively suggest that while children can bring happiness, this is influenced by various factors, including gender, marital status, and education.**

# Hypothesis

**Women will experience a more significant rise in happiness from having children compared to men, and the effect of children on happiness will be more pronounced for individuals with greater education and economic resources than those with fewer economic resources.**

## Section 2

# Data & Sample Size



# Understanding the Pairfam Dataset

01

## **Comprehensive Information**

The pairfam dataset provides longitudinal information on individuals' relationships, family dynamics, and subjective well-being in Germany.

02

## **Sample Size**

Analysis based on 16201 individuals and 80275 observations, examining changes in parental happiness before and after the birth of a child.



## Section 3

# Description: Variables of Interest

# Method

## **Fixed Effects Model**

We will employ fixed effects models to account for unobserved individual characteristics and better understand how various factors, such as gender, education, and economic resources, interact with the impact of children on parental happiness over time.

# Exploring Key Variables

01

## **Dependent Variable**

Parental happiness, measured by general satisfaction with life on a scale of 0 to 10.

02

## **Independent Variables**

Count of children, parents' gender, age, education level, economic status, and labor force status.

# Sample Statistics

Table 1. Summary Statistics of Main Independent Variable and Explanatory Variables

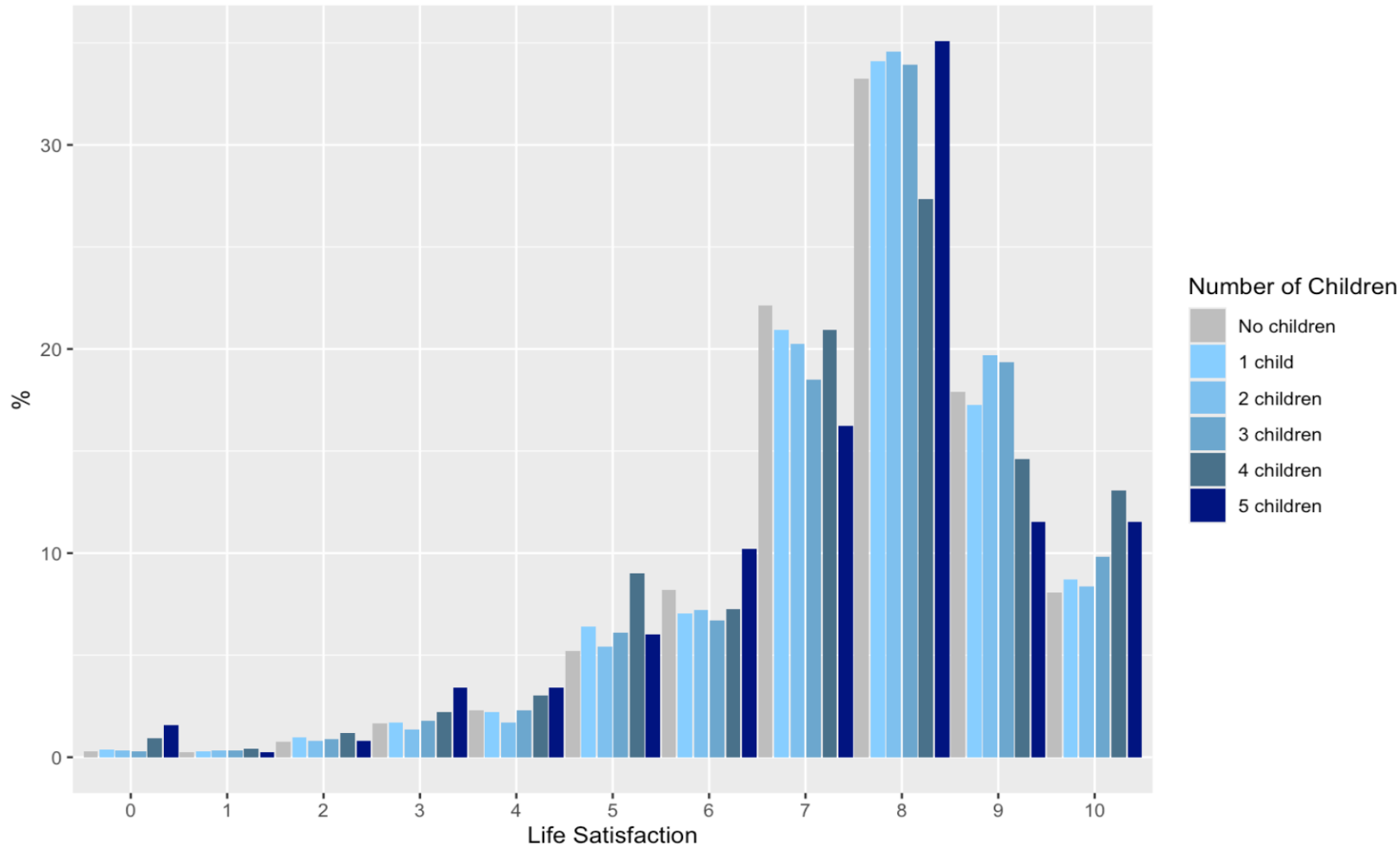
	0 (N=43120)	1 (N=13994)	2 (N=16196)	3 (N=5398)	4 (N=1185)	5 (N=382)	Overall (N=80275)
<b>Satisfaction with life</b>							
Mean (SD)	7.54 (1.64)	7.52 (1.69)	7.62 (1.62)	7.61 (1.71)	7.38 (1.96)	7.30 (2.01)	7.55 (1.66)
Median [Min, Max]	8.00 [0, 10.0]	8.00 [0, 10.0]	8.00 [0, 10.0]	8.00 [0, 10.0]	8.00 [0, 10.0]	8.00 [0, 10.0]	8.00 [0, 10.0]
<b>NKIDS</b>							
0	43120 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	43120 (53.7%)
1	0 (0%)	13994 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	13994 (17.4%)
2	0 (0%)	0 (0%)	16196 (100%)	0 (0%)	0 (0%)	0 (0%)	16196 (20.2%)
3	0 (0%)	0 (0%)	0 (0%)	5398 (100%)	0 (0%)	0 (0%)	5398 (6.7%)
4	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1185 (100%)	0 (0%)	1185 (1.5%)
5	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	382 (100%)	382 (0.5%)
<b>GENDER</b>							
1-Female	19584 (45.4%)	8313 (59.4%)	10202 (63.0%)	3445 (63.8%)	724 (61.1%)	274 (71.7%)	42542 (53.0%)
2-Male	23536 (54.6%)	5681 (40.6%)	5994 (37.0%)	1953 (36.2%)	461 (38.9%)	108 (28.3%)	37733 (47.0%)
<b>Age</b>							
Mean (SD)	26.2 (8.03)	35.6 (6.52)	38.1 (5.55)	38.9 (5.09)	38.9 (5.32)	39.9 (4.94)	31.3 (9.06)
Median [Min, Max]	26.0 [14.0, 50.0]	36.0 [16.0, 50.0]	38.0 [17.0, 50.0]	39.0 [23.0, 50.0]	39.0 [25.0, 49.0]	40.0 [25.0, 49.0]	31.0 [14.0, 50.0]
<b>EDU</b>							
1-Currently Enrolled	16640 (38.6%)	327 (2.3%)	135 (0.8%)	29 (0.5%)	14 (1.2%)	1 (0.3%)	17146 (21.4%)
2-Vocational or Technical Degree	11402 (26.4%)	7555 (54.0%)	8131 (50.2%)	2990 (55.4%)	733 (61.9%)	260 (68.1%)	31071 (38.7%)
3-College or University Degree	15078 (35.0%)	6112 (43.7%)	7930 (49.0%)	2379 (44.1%)	438 (37.0%)	121 (31.7%)	32058 (39.9%)
<b>Labor Force Status</b>							
3-Working	27890 (64.7%)	10977 (78.4%)	13345 (82.4%)	4048 (75.0%)	706 (59.6%)	225 (58.9%)	57191 (71.2%)
1-Education	12393 (28.7%)	367 (2.6%)	220 (1.4%)	60 (1.1%)	19 (1.6%)	2 (0.5%)	13061 (16.3%)
2-Non-Working	2837 (6.6%)	2650 (18.9%)	2631 (16.2%)	1290 (23.9%)	460 (38.8%)	155 (40.6%)	10023 (12.5%)
<b>Net equivalence income (OECD)</b>							
Mean (SD)	1720 (1320)	1700 (1140)	1670 (1120)	1500 (1010)	1190 (783)	1110 (709)	1680 (1230)
Median [Min, Max]	1550 [0.400, 52000]	1560 [1.00, 36900]	1520 [59.5, 41000]	1350 [43.1, 27100]	1050 [121, 16700]	967 [167, 9580]	1510 [0.400, 52000]

the average happiness score for life is 7.55.

the parents have an average of 0.86 children.

# Sample Statistics

Figure 1. Distribution of Life Satisfaction Scores



## Distribution

a high proportion of participants rated their quality of life as 7, 8, or 9.

The mean is 7.55.

No clear patterns are apparent.

## Section 4

# First Results & Further Strategy

# Impact of Having Children

01

## **OLS Model**

Positive association between having children and life satisfaction.

02

## **FE Model**

Nuanced understanding, indicating potential influence of unobserved characteristics of individuals who choose to have children.



# Sample Statistics

## OLS Model:

The coefficients for NKIDS1 to NKIDS5 (number of children) are all positive and statistically significant. This suggests that having children is associated with higher life satisfaction in the OLS model.

**Gender:** Men reported slightly lower life satisfaction than women.

**Education:** Those with vocational or technical degrees had lower life satisfaction compared to those with no degree. College degrees showed no significant difference.

**Age:** Life satisfaction tended to decrease with age.

**Work:** People in education or not working reported lower life satisfaction compared to those who were employed.

**Income:** Higher income was associated with greater life satisfaction.

**Year:** Life satisfaction varied across the years studied, with some years showing significant differences from the baseline year.

Characteristic	OLS			Fixed Effects		
	Beta	95% CI <sup>1</sup>	p-value	Beta	95% CI <sup>1</sup>	p-value
NKIDS						
0	—	—		—	—	
1	0.40	0.36, 0.43	<0.001	0.16	0.11, 0.21	<0.001
2	0.55	0.52, 0.59	<0.001	0.08	0.01, 0.15	0.024
3	0.65	0.59, 0.70	<0.001	0.14	0.04, 0.25	0.008
4	0.57	0.48, 0.67	<0.001	0.23	0.04, 0.42	0.017
5	0.56	0.40, 0.73	<0.001	0.32	-0.03, 0.66	0.075
GENDER						
1-Female	—	—				
2-Male	-0.04	-0.06, -0.02	<0.001			
EDU						
1-Currently Enrolled	—	—				
2-Vocational or Technical Degree	-0.19	-0.24, -0.14	<0.001			
3-College or University Degree	0.03	-0.01, 0.08	0.2			
Age	-0.31	-0.33, -0.29	<0.001			
Labor Force Status						
3-Working	—	—				
1-Education	-0.05	-0.09, -0.01	0.025			
2-Non-Working	-0.63	-0.67, -0.60	<0.001			
Net equivalence income (OECD)	0.15	0.14, 0.16	<0.001			
WAVE						

# Sample Statistics

## FE Model:

The coefficients for NKIDS1 to NKIDS5 are smaller in the FE model compared to the OLS model, and some even change signs. This suggests that the initial positive association between children and life satisfaction in the OLS model might be inflated due to unobserved characteristics of individuals who choose to have children.

Characteristic	OLS			Fixed Effects		
	Beta	95% CI <sup>1</sup>	p-value	Beta	95% CI <sup>1</sup>	p-value
NKIDS						
0	—	—		—	—	
1	0.40	0.36, 0.43	<0.001	0.16	0.11, 0.21	<0.001
2	0.55	0.52, 0.59	<0.001	0.08	0.01, 0.15	0.024
3	0.65	0.59, 0.70	<0.001	0.14	0.04, 0.25	0.008
4	0.57	0.48, 0.67	<0.001	0.23	0.04, 0.42	0.017
5	0.56	0.40, 0.73	<0.001	0.32	-0.03, 0.66	0.075
GENDER						
1-Female	—	—				
2-Male	-0.04	-0.06, -0.02	<0.001			
EDU						
1-Currently Enrolled	—	—				
2-Vocational or Technical Degree	-0.19	-0.24, -0.14	<0.001			
3-College or University Degree	0.03	-0.01, 0.08	0.2			
Age	-0.31	-0.33, -0.29	<0.001			
Labor Force Status						
3-Working	—	—				
1-Education	-0.05	-0.09, -0.01	0.025			
2-Non-Working	-0.63	-0.67, -0.60	<0.001			
Net equivalence income (OECD)	0.15	0.14, 0.16	<0.001			
WAVE						

# Influence on Life Satisfaction

01

## **Females**

Experience a more significant increase in happiness from having children, especially for smaller numbers of children.

02

## **Males**

Impact on life satisfaction is generally weaker compared to females.

# Sample Statistics

## Females:

Having a first child is associated with a significant increase in life satisfaction (0.23).

Having a second child is associated with a smaller, but still significant, increase in life satisfaction (0.11).

**Males:**

The association is weaker for males compared to females.

Having one or two children has a smaller, positive association with life satisfaction (0.10 and 0.06, respectively).

Having three or more children has a stronger, positive association (0.21 for three children, and 0.35 for four children).

Characteristic	Female			Male		
	Beta	95% CI <sup>1</sup>	p-value	Beta	95% CI <sup>1</sup>	p-value
NKIDS						
0	—	—		—	—	
1	0.23	0.15, 0.31	<0.001	0.10	0.02, 0.17	0.012
2	0.11	0.01, 0.21	0.029	0.06	-0.03, 0.16	0.2
3	0.11	-0.04, 0.25	0.2	0.21	0.06, 0.37	0.008
4	0.17	-0.10, 0.44	0.2	0.35	0.08, 0.62	0.012
5	0.29	-0.19, 0.77	0.2	0.34	-0.18, 0.85	0.2
WAVE						

# Key Points

The association between having children and life satisfaction might be **stronger** for females than for males, especially for smaller numbers of children.

For males, having three or more children might be associated with a larger increase in life satisfaction compared to having fewer children.

It's important to remember that these findings are based on observational data, so they cannot establish a causal relationship between having children and life satisfaction.

# Overall Relationship

While the OLS model suggests a positive association between having children and life satisfaction, the FE model provides a more nuanced picture.

It's likely that individuals who choose to have children already have higher baseline life satisfaction on average. Having children might not necessarily increase life satisfaction for everyone.

The models suggest a complex relationship between having children and life satisfaction. While there might be a positive association, unobserved factors and individual differences likely play a significant role.

# Further Research

Further investigation is necessary to gain a deeper understanding of how the impact of parenthood on life satisfaction differs between men and women.

To further strengthen the analysis, it would be beneficial to consider including additional control variables. These variables could capture time-varying factors such as changes in marital status, health status, immigrant status, socioeconomic circumstances, social support, or work-life balance.

Future studies could also explore the role of cultural and societal factors in shaping the association between having children and life satisfaction, as these factors may vary across different countries and cultures.



# Caveat

Be cautious about potential reverse causality

Life satisfaction itself may influence the decision to have children,  
rather than the other way around.



# Thank You

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