

# **The Experience of First Motherhood and Its Impact on Fertility Desires and Decisions**

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## **Abstract**

This paper investigates how a mother's well-being during her first experience of motherhood influences both her desire and likelihood of having a second child. Using data from the UK Millennium Cohort Study, the emotional state of mothers when their first child is approximately 9 months old is examined across four key areas: emotional support from their partner, life satisfaction, frequent tiredness, and experiences of misery or depression. The findings indicate that partner support and life satisfaction positively affect both the desire for a second child and the likelihood of having one, as shown by longitudinal data. The study also explores how these emotional states are shaped by broader life contexts, including work conditions, financial concerns, and the partner's involvement in domestic and caregiving responsibilities.

**Keywords:** fertility, fertility intentions, mothers' wellbeing, motherhood, fatherhood

## **Introduction**

The persistently low fertility rates in Western countries have led scholars to examine the factors shaping couples' decisions to have children, focusing on choices around the first child, the second, and, less frequently, any additional children. The decision to have a first child is noteworthy, as it signifies a transition into parenthood, fulfilling the couple's desire for children and strengthening their bond. Key determinants include delayed transitions to adulthood—such as the completion of education, attainment of stable employment, financial security, and the complex process of leaving the parental home, often alongside or preceding the formation of a cohabiting partnership.

The transition to a second child has garnered particular policy interest, as a single child per woman does not support generational replacement. Additionally, the experience of the first child often provides parents with a clearer understanding of the benefits and challenges of childrearing, which can influence their decision to have another child. For women balancing career aspirations, the birth of a first child can be especially informative, revealing the complexities of managing work and family responsibilities and the degree of the partner's participation in household and caregiving tasks. Cavalli (2009) shows that women who are unable to return to work after their first child, or who feel unsupported in balancing work and family, are less likely to plan for a second child and more prone to disagreement with their partners over family expansion. While couples may still desire additional

children, this aspiration often clashes with the high opportunity costs related to career, qualification, and income sacrifices (Dey and Wasoff, 2010).

Studies also highlight cross-country differences, with the paper by Brodmann et al (2007) examining career-driven women having their first child in Denmark and Spain. Results indicate that Danish women, who benefit from stronger welfare supports and more balanced task-sharing with their partners, are more likely to have a second child. In general, the likelihood of a second child is greater in families where employment attachment is ensured for both parents (Olah, 20023). Financial stability is also a crucial factor; higher income levels positively influence the birth of a second child, while financial concerns deter it (Kreyenfeld et al, 2023) while generous child benefits are associated with increased likelihood of a second child (Riphahn and Wijnck, 2017).

This paper focuses on mothers' subjective well-being and its impact on both the desire for and the likelihood of a second child. The study emphasizes the importance of individual feelings and reactions—often unpredictable before the first child's birth—in shaping this decision. The sources of well-being or distress may vary significantly among women. For instance, for one woman, a career may provide both financial security and fulfillment, supporting the decision for another child; for another, returning to work may be financially necessary but unsatisfying, reducing the likelihood of a second child, especially if work-family conflicts remain unresolved.

Indeed, new mothers often experience conflict over leaving their child in the care of others to return to work (Hock et al, 1984). Generally, parents report a decline in well-being after the birth of their first child, and policies aimed at supporting mothers play a crucial role in mitigating these effects (Nordenmark, 2021). Mothers, in particular, may experience loneliness for various reasons, including social pressure to conform to an idealized maternal role, a reduction in social contact, and a lack of empathy from remaining social connections (Lee et al, 2019). This distress may manifest both mentally and physically; for instance, mothers show higher rates of antidepressant prescriptions, GP visits, and psychiatric consultations than non-mothers during the initial years following the birth of a first child (Bearth, 2024). More educated mothers, in particular, appear to experience elevated distress levels (McConachie et al, 2008).

Jarosz et al (2023) examine how mothers' free time, leisure activities, tiredness, and satisfaction with leisure affect second birth transitions: they highlight the importance of rest and personal time in fertility decisions, showing significant links between these factors and second birth risk. Partner involvement in family responsibilities has a similarly positive impact (Brodmann, 2007). Nagase and Brinton (2017) find that low paternal involvement in caregiving, which varies with factors like education level and company size, has a negative effect on the decision to have a second child. In Japan, where the study is carried out, graduates employed by large companies, where work demands

are highest, tend to experience greater opportunity costs. Additionally, emotional rather than practical support from partners has been found to be more impactful (Schaffnit and Sear, 2017).

Finally, the paper by Luppi and Mencarini (2018) offers insights into the decline in parental well-being across various life domains between the year before birth and when the first child reaches age three, using data from the HILDA survey of Australian families. Findings show that lower levels of parental well-being significantly influence fertility expectations, with work satisfaction being especially influential for mothers and financial satisfaction for fathers.

In this paper, we examine the impact of a mother's well-being during her first experience of motherhood on both the desire to have a second child and the actual likelihood of doing so. Using data from the UK Millennium Cohort Study, we analyze the emotional state of mothers when their first child is around 9 months old across four dimensions: whether they feel that their partner meets their emotional needs, whether they feel fulfilled in life, whether they frequently feel tired, and whether they experience feelings of misery or depression. Furthermore, for the significant well-being states, the study investigates the objective factors contributing to these emotional experiences, which may be different for different types of women.

## **Data and methods**

We utilize data from the Millennium Cohort Study, a representative survey of approximately 19,000 children born in the UK in 2000/2002. At the time of the first interview, the children were, on average, 9 months old. Currently, the first 8 waves of the survey are available, covering the cohort children until they are around 23 years old. Children, later teenagers and young adults, and their families are followed over time. The data not only provides a valuable source of information across different stages of life, but also enables the establishment of connections over time.

We select a sample of women who, in wave 1, have only one child (specifically, the cohort child). The women's feelings are measured during wave 1: from Table 1, we observe that 68.4% report having a partner who is sensitive to their needs, 74.6% say they get what they want from life, 44.1% declare feeling tired most of the time, and 12.6% describe themselves as miserable or depressed. Additionally, 63.3% express a desire for a second child, which is our first dependent variable of interest. We include a large number of control variables, all measured in wave 1: age of the woman at the first child, the presence of the father or a partner in the household, income level, mother's employment status, education level, and alcohol and cigarette consumption. The impact of these variables on the desire of a second child is estimate through a logistic regression. Our second variable of interest, observed fertility, is the duration between the first and second child. In Table 2, this duration is measured and described in months: 25% of the women who have their second child the

fastest do so within 31 months, 50% within 49 months, and 75% within 134 months. We therefore estimate a survival model (complementary log-log model). The variables representing the woman's well-being, as well as many control variables, are measured in wave 1. The exceptions are the presence of the father or partner. Table 3 summarizes the objective factors influencing the mother's well-being: whether the pregnancy was unplanned; the mother's employment status and its reasons (working due to financial need or other reasons, not working due to a preference to stay home or other factors); the partner's involvement in housework and child care; the child's temperament (which may be 'easier' or 'more challenging' for new parents); the child's development; health issues affecting the mother and child; and the couple's financial situation after the child's birth.

### **Preliminary results and further developments**

Table 4 comprises our main results. Our findings suggest that emotional support from the partner and a sense of life fulfillment have a positive effect on both the desire for another child (when the first child is 9 months old) and the actual probability of having one, as estimated. A significant effect of depression on fertility outcomes is also observed. We find that frequent tiredness negatively affects the intention to have more children but does not impact the actual likelihood. We observe that those with higher levels of education are more likely to have another child, employment status does not affect the likelihood of having a second child, whereas income has a positive effect. Additionally, the study examines whether these emotional experiences are shaped by broader life circumstances of the mothers and their partners, including work conditions, the partner's practical involvement, concerns about the couple's financial situation, controlling for the health of both mother and child, the child's temperament and development (as outlined in Table 3). Table 4 summarizes the results. It shows that when a partner participates in household and caregiving activities, the new mother is more likely to feel that her needs are understood. In the other equation, we observe that participation in the labor market—whether out of desire or necessity—increases the likelihood of feeling fulfilled in life. Conversely, not having savings (or never having had them) negatively impacts this sense of fulfillment. We also note the significance of more exogenous factors: having a child with a positive temperament, a good level of development, and the mother's health are predictors of a higher level of well-being for the mother.

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## TABLES

**Table 1- Fertility desires, mother's wellbeing at first child, and woman's characteristics**

Variable	Obs	Mean	Std. Dev.
Wants a second child	7198	.633	.482
Partner is sensitive to her needs	7198	.684	.465
Gets what wants out of life	7198	.746	.435
Feels tired most of the time	7198	.441	.497
Often feels miserable or depressed	7198	.126	.332
<i>Woman Controls:</i>			
Lives with father of the baby	7198	.737	.44
Lives with a partner	7198	.003	.051
Age at first child	7196	26.2	6.0
Income	6662	21821	16461
Drank alcohol during pregnancy	7198	.292	.455
Smoked in the last 2 years	7198	.103	.304
Employment:			
Employee	7198	.877	.328
Self-Employed	7198	.038	.192
Education:			
None of these	7198	.134	.341
Some Secondary School	7198	.584	.493
High School Diploma	7198	.094	.292
First Degree	7198	.147	.354
Higher Degree	7198	.041	.198

**Table 2 – Time to the second child**

	Time at risk	Incidence rate	Number of subjects	Survival Time		
				25%	50%	75%
Total	484,979	.0095984	7198	31	49	134

**Table 3 – Mother’s life circumstances at first child**

Variable	Obs	Mean	Std. Dev.	Min	Max
Pregnancy was a surprise	7198	.473	.499	0	1
<i>Employment</i>					
Works because needs money	7198	.188	.391	0	1
Works, not for money	7198	.38	.485	0	1
Doesn't work, likes to stay home	7198	.269	.443	0	1
Doesn't work, other reasons	7198	.163	.37	0	1
<i>Shares responsibility with husband/husband does most of it:</i>					
Feeding baby	7198	.189	.391	0	1
Changing nappies	7198	.255	.436	0	1
Getting up at night	7198	.267	.443	0	1
Cooking	7198	.303	.46	0	1
Cleaning	7198	.223	.416	0	1
Hours of Childcare paid	7195	6.332	12.86	0	80
<i>Baby temperament</i>					
Happy sounds when changing nappy	7198	.732	.443	0	1
Pleasant in unfamiliar places	7198	.811	.391	0	1
Pleasant when brushing hair	7198	.602	.489	0	1
Content when interrupted when eating	7198	.655	.476	0	1
Calm with minor injuries	7198	.617	.486	0	1
Rarely objects to bathing different person/place	7198	.617	.486	0	1
Rarely wary of strangers	7198	.786	.41	0	1
Rarely shy	7198	.737	.44	0	1
Rarely fretful in new situation	7198	.745	.436	0	1
Rarely bothered by different sleeping place	7198	.506	.5	0	1
<i>Baby development</i>					
Sits up	7198	.971	.167	0	1
Stands up holding on	7198	.747	.435	0	1
Holds small objects	7198	.888	.315	0	1
Passes toys	7198	.951	.215	0	1
Gives toys	7198	.628	.483	0	1
Waves bye	7198	.432	.495	0	1
Nods for yes	7198	.082	.274	0	1
<i>Health</i>					
Baby was born underweight	7198	.071	.256	0	1
Number of baby’s health problems	7195	1.761	1.94	0	50
Illness during pregnancy	7198	.384	.486	0	1
<i>Financial situation</i>					
No savings before birth and now	7198	.317	.465	0	1
Had savings before birth but spent all	7198	.127	.333	0	1

**Table 4 – Mother’s wellbeing at first child and fertility desires and realizations**

VARIABLES	Wants a Second Child	Has a Second Child
Partner is sensitive to her needs	0.597*** (0.0813)	0.572*** (0.0915)
Gets what wants out of life	0.202*** (0.0655)	0.185** (0.0779)
Feels tired most of the time	-0.200*** (0.0569)	-0.104 (0.0652)
Often feels miserable or depressed	-0.0668 (0.0848)	-0.209** (0.0995)
Age at first child	-0.0571*** (0.00559)	-0.0903*** (0.00672)
<i>Time passed from first child to second child: (less than 2 years omitted category)</i>		
Time passed from first child: 3 years		8.449*** (0.726)
Time passed from first child: 4 years		9.062*** (0.735)
Time passed from first child: over 5 years		9.625*** (0.746)
Father present	0.765*** (0.0835)	0.946*** (0.0934)
Partner present	-0.0604 (0.522)	1.099*** (0.188)
Income	0.00582*** (0.00219)	0.00767*** (0.00130)
<i>Employment (“Not Employed” omitted category):</i>		
Employee in wave 1	0.183* (0.106)	-0.187 (0.123)
Self Employed in wave 1	0.0935 (0.179)	0.0856 (0.205)
<i>Education (“None of these” omitted category):</i>		
Some secondary school	0.210** (0.0852)	-0.231** (0.102)
High school diploma	0.636*** (0.124)	0.0810 (0.141)
First degree	0.809*** (0.119)	0.681*** (0.133)
Higher degree	0.850*** (0.176)	0.981*** (0.191)
Smoked in the last 2 years (wave 1)	0.0108 (0.0888)	-0.165 (0.102)
Drank alcohol during first pregnancy	0.0845 (0.0607)	0.0101 (0.0691)
Constant	0.422*** (0.149)	-8.899*** (0.748)
Observations	6,661	23,107
Number of id		7,038

**Table 5 – Determinants of mother’s wellbeing at first child**

VARIABLES	(1) Partner is sensitive to her needs	(2) Gets what wants out of life
Pregnancy was a surprise	-0.423*** (0.0991)	-0.510*** (0.0795)
<i>Employment (“Doesn't work, other reasons” omitted):</i>		
Works because needs money	0.228 (0.156)	0.224* (0.127)
Works, not for money	0.365** (0.142)	0.448*** (0.116)
Doesn't work, likes to stay home	0.346** (0.139)	0.130 (0.114)
<i>Shares responsibility with husband/husband does most of it:</i>		
Feeding baby	0.272 (0.172)	0.149 (0.116)
Changing nappies	0.713*** (0.156)	0.0431 (0.106)
Getting up at night	0.623*** (0.126)	0.175** (0.0879)
Cooking	0.658*** (0.115)	0.144* (0.0829)
Cleaning	0.632*** (0.133)	0.117 (0.0902)
Hours of Childcare paid	-0.00676 (0.00443)	0.0104*** (0.00377)
<i>Baby temperament and development:</i>		
Happy sounds when changing nappy	0.553*** (0.102)	0.214** (0.0852)
Pleasant in unfamiliar places	0.321*** (0.117)	0.330*** (0.0958)
Pleasant when brushing hair	0.265*** (0.0997)	0.256*** (0.0800)
Content when interrupted when eating	0.211** (0.101)	0.190** (0.0817)
Calm with minor injuries	0.215** (0.0983)	0.212*** (0.0783)
Rarely objects to bathing different person/place	0.226** (0.100)	0.247*** (0.0802)
Rarely wary of strangers	0.210* (0.121)	0.408*** (0.0956)
Rarely shy	0.107 (0.114)	0.159* (0.0909)
Rarely fretful in new situation	0.270** (0.117)	0.244*** (0.0936)
Rarely bothered by different sleeping place	0.202** (0.0998)	0.124 (0.0790)
<i>Baby development</i>		
Sits up	0.0828 (0.267)	0.129 (0.218)

Stands up holding on	-0.0590 (0.111)	-0.178** (0.0901)
Holds small objects	0.207 (0.141)	0.255** (0.114)
Passes toys	0.148 (0.197)	0.394** (0.160)
Gives toys	-0.0161 (0.0999)	0.141* (0.0800)
Waves bye	0.170* (0.100)	0.0799 (0.0800)
Nods for yes	0.0823 (0.179)	-0.0610 (0.140)
<i>Health</i>		
Baby was born underweight	-0.341** (0.163)	0.0320 (0.144)
Number of baby's health problems	0.000994 (0.0244)	-0.00997 (0.0195)
Illness during pregnancy	-0.172* (0.0949)	-0.182** (0.0765)
<i>Financial situation</i>		
No savings before birth and now	-0.434*** (0.110)	-0.565*** (0.0881)
Had savings before birth but spent all	-0.443*** (0.140)	-0.509*** (0.113)
<i>Control variables</i>		
Age at first child	0.0185* (0.00960)	-0.0108 (0.00750)
<i>Education ("None of these" omitted category):</i>		
Some Secondary School	0.0979 (0.142)	0.181 (0.115)
High School Diploma	0.174 (0.205)	0.726*** (0.174)
First Degree	0.426** (0.195)	0.934*** (0.163)
Higher Degree	0.858*** (0.317)	0.612*** (0.224)
Constant	-1.240*** (0.448)	-0.956*** (0.367)
Observations	5,323	5,323

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