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## Fertility problems: a widespread concern among women Results from the French Generations and Gender Survey

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### Abstract

In this paper, we explore the issue of infertility, considering it not only from a medical perspective but also from a sociological perspective. Thus, we analyse *perception of fertility problems* as men and women report it. We used data from the survey: "Étude des Relations Familiales et Intergénérationnelles"<sup>2</sup> (ERFI), the French version of the Generations and Gender Survey (GGS)<sup>3</sup>. We measured perception of fertility problems and use of medical treatment for infertility among a representative sample of French women and men aged 25 to 49 years old and who have at least one child<sup>4</sup>. We observed a widespread fertility problems concern: 32% of mothers declared they have encountered fertility problems during their reproductive life, including 21% who had no treatment, 7% who had recourse to minimal treatments (fertility medication to stimulate ovulation, methods to determinate period of ovulation, etc...) and 4% who had significant medical intervention, meaning gamete or/and embryo manipulation (artificial insemination or *in vitro* fertilization). Fathers also declared a high level of fertility problems (21%), but lower than mothers did. Moreover, perception of fertility problems is more homogeneous among fathers than among mothers: mothers located in French areas with higher fertility rates more often declared problems with fertility. Our results reinforce the hypothesis of a "social pressure to conceive" in France, but need further development.

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<sup>2</sup> Translation in english : 'Familial and intergenerational relationships study'

<sup>3</sup> <http://www-erfi.ined.fr/> ; <http://www.unece.org/ead/pau/ggp>

<sup>4</sup> In ERFI, questions about fertility problems people may have encountered during all their reproductive lives were asked only to men and women who had at least one child.

## 1. Introduction and purpose

### *French fertility and “social pressure to conceive”*

In the context of a low European fertility (Kohler *et al.*, 2002), the fertility rate in France is one of the highest in Europe, with two children per woman in 2007 (Pla, 2008). In addition, this rate has been stable for 25 years (Toulemon and Mazuy, 2001). This stable fertility rate is driven by a strong norm: few women in France (12%) remain childless (Mazuy, 2006), and even fewer couples (4%) remain childless (Toulemon, 1995). Childlessness is a limited phenomenon in France, explained by several situations: postponement or rejection of parenthood, fertility problems, or life pathways in which the parenthood project could not be realised (Donati, 2000). Due to this fertility context, we assume that French society drives a “social pressure to conceive” that can have an impact on reproductive behaviours and perceptions.

Regarding gender effect, the French fertility norm appears to be weaker for men than for women (Mazuy, 2006): French men more often remain childless than French women do (Bergouignan, 2005; Mazuy, 2006; Robert-Bobée, 2006) and men are more often stepfathers than women (Toulemon, 2005; Mazuy, 2006). Social factors may play a different role according to gender, as childlessness is more prevalent among highly educated women and among poorly educated men, both of whom are more often excluded from the marital market (Toulemon and Lapierre-Adamcyk, 2000; Mazuy, 2002).

We assume that the social pressure to conceive has an impact on the perception of fertility problems among the French population. Women and men who plan to have a child may be more sensible to fertility problems and thus, be more “impatient” to get pregnant (Leridon, 1992). Moreover, the development of medical contraception (Leridon 2002) and of medical infertility treatments (La Rochebrochard, 2003) in recent past decades may have reinforced such an “impatience”, by supporting the idea that couples can have a “child when they want” (La Rochebrochard and Leridon, 2005). The social and medical contexts may have therefore modified the relationship between the French population and infertility.

***From infertility to perception of fertility problems***

Traditionally, infertility is clinically defined as the lack of conception after one year of unprotected intercourse (Larsen, 2005). The median overall prevalence of infertility among countries was recently estimated to be 9%, ranging from 3.5% to 16.7% in more developed countries and from 6.9% to 9.3% in less developed countries (Boivin *et al.*, 2008). However, infertility rate varies widely according to how it is measured (medical diagnosis or self-report), leading to infertility prevalence estimates ranging from 6.1% to 32.6% (Swan, 2008).

Most published studies have tried to measure infertility from a medical perspective. However, the social dimension of fertility problems should also be explored. With this approach, the goal is not to measure the outcome of periods of unprotected intercourse, but rather to explore the feeling people have about their ability to conceive. Such an indicator may differ greatly from the medical approach, because couples may be clinically infertile (if they did not manage to conceive after one year of unprotected intercourse) but not feel and not declare themselves as infertile, or on the other hand, couples may not be clinically infertile (could manage to conceive before one year of delay) but feel and declare themselves to be infertile.

This paper explores infertility in the French context of high social pressure to conceive. We explore both the social dimension of infertility (based on the feeling of individuals about having encountered fertility problems) and the medical dimension of infertility (based on use of medical treatment). We ask three main questions:

- 1) What is the prevalence of the perception of fertility problems and of medical use in the French population?
- 2) Do men and women declare similar levels of fertility problems and what percentage use medical treatment?
- 3) What influences perception of fertility problems and the pursuit of medical treatment among women and among men?

## **2. Population and methods**

### *Survey*

In 2005, the ERFI study (*Étude des Relations Familiales et Intergénérationnelles*), the French version of the International Generations and Gender Survey (IGGS), was carried out in metropolitan France among 10,079 men and women ages 18 to 79 years old.

In ERFI, several questions concerning fertility problems and use of medical treatments were asked. However, these questions were only asked to men and women who were less than 50 years old (n=5,608) and who were parents (n=3,347). Childless people (defined as not having a child and not having previously adopted) did not receive these questions. Therefore sterile people and people with a high risk of being unable to conceive are excluded from this analysis. Due to these restrictions, prevalence of the perception of fertility problems and of use of medical treatments estimated in this paper is thought to be lower than the level which would have been observed in the general population.

We excluded from our study population women and men who were younger than 25 years old (n=80) because young parents have specific profiles with regard to fertility issues. Our analyses were finally carried out among 3,267 parents (1,950 women and 1,317 men), ages 25 to 49.

### *Perception of fertility problems and use of infertility treatment estimates*

We combined two ways to measure infertility: a medical “objective” way (use of infertility treatments) and a sociological “subjective” way (perception of fertility problems).

1) Perception of fertility problems: this indicator expresses the general perception of difficulties by considering both difficulties that were finally overcome and those who led to a failure to conceive. Two of ERFI’s questions were used.

1.a. A first question concerns fertility problems that were finally overcome:

**« Have you ever waited more than you would have liked to become pregnant\* but finally succeeded? »**

**\*that your partner get pregnant** if the respondent is a man

1. Yes
2. No

1.b. A second question concerns fertility problems that led to a failure to conceive

**« Have you ever tried to become pregnant with your partner, but were unable to conceive? »\***

\* If the woman (or the man's partner if the respondent is a man) was pregnant, the question was slightly modified: **« Before this pregnancy, have you\*\* ever tried to become pregnant with your partner, without being able to conceive? »** (\*\* your partner if the respondent is a man).

1. Yes
2. No

“Perception of fertility problems” concerns parents who answered positively to one of these two questions (or both).

2) Use of medical treatment: the ERFI's question was:

**Can you report all the medical treatments you have used?**

1. Medication
2. Methods to determinate the ovulation period
3. Fertility medication that stimulates the development of follicles in the ovary
4. In vitro fertilisation (IVF)
5. Intracytoplasmic sperm injection (ICSI)
6. Surgery
7. Artificial insemination with sperm of the partner
8. Artificial insemination by donor
9. Other medical treatments
10. Method not listed here

Among parents who declared they had encountered fertility problems, we thus distinguished:

- parents who have never used medical treatment;

- parents who have used minimal treatment including medication, methods to determine the ovulation period, fertility medication that stimulated the development of follicles in the ovary, other medical treatment (answers 1, 2, 3, 9, 10 in the box above);
- parents who have had significant medical intervention, meaning *in vitro* fertilization, intracytoplasmic sperm injection, surgery, artificial insemination with sperm of the partner or sperm of a donor (answers 4,5,6,7,8 in the box above).

### 3. Level of the perception of fertility problems and of medical treatment

#### *One mother out three declares perception of fertility problems*

Almost one third (31.8%) of mothers declare they have encountered problems with fertility during their reproductive lives (table 1). This level of the perception of fertility problems is lower than the level observed in previous French INED surveys<sup>5</sup> which concluded that 40% of women aged 35-39 years declared fertility problems (La Rochebrochard and Leridon, 2005). However, both sources are not comparable, as the frequency observed in ERFI was estimated only among mothers, excluding childless women (who likely declare a higher level of fertility problems). Thus, the level of perception of fertility problems observed in ERFI should not be extrapolated to the general population, for which a higher level is expected.

**Table 1: Perception of fertility problems regarding to age among French mothers (n=1,950)**

	25-29	30-34	35-39	40-44	45-49	Total (25-49 years)	Total (30-49 years)
%	25,53	33,38	32,19	32,64	31,83	31,8	32,5
n	168	368	503	456	455	1,950	1,782

*Source:* Ined-Insee, Erfi-GGS1, 2005

*Field:* mothers between 25 and 49 years old, in 2005

*Note:* numbers of mothers are not weighted, all percentages are weighted.

Compared to the level of clinical infertility, which is around 9% (Boivin *et al.*, 2008), the level of the perception of fertility problems observed in ERFI is very high. Such a high level may be explained by the social pressure to conceive hypothesis. Women who fail to conceive

<sup>5</sup> Previous fertility surveys carried out by the National Demographic Studies Institute (INED) were providing data on fertility problems for years 1978, 1988, 1994 and 1998.

in the first weeks or months of unprotected intercourse may feel and declare themselves to have experienced fertility problems and even “sterility”<sup>6</sup>. In a previous work based on 12 semi-directive interviews among women who had been mothers for less than 12 months, we noticed that women often experienced periods of doubts regarding their ability to conceive (Mazuy, 2006). When they had doubts, they considered themselves to be responsible for the inability to conceive. It would be interesting to investigate in a larger French representative sample, if women feel responsible for the fertility problems they declared or if they believe their partner might also be responsible for such problems. These “assumptions” could be compared with medical diagnosis, which conclude that the male partner is also responsible for the lack of conception in 58% of cases (Thonneau *et al.*, 1991; La Rochebrochard, 2001).

The level of the perception of fertility problems does not vary with age (Table 1). Only the youngest mothers (below 30 years old) less often declare perception of fertility problems ( $p=0.07$ ). Since mothers were asked about perception of fertility problems over their lifecourse, we cannot explore if perception of fertility problems varies with the age at conception attempt. It is well established that the ability to conceive declines with woman’s age<sup>7</sup> (Baird *et al.*, 2005). In France, society and the mass media widely support the idea that women should have their children at young ages (before 35 years old) in order to avoid problems with fertility (Mazuy 2006, Bessin *et al.*, 2005). It would be very interesting to explore the age effect on perception of fertility problems. Women older than 35 trying to become pregnant might experience more problems with fertility and a more important feeling of stress than younger women or, on the contrary, such an awareness might weaken impatience among “older” women.

### *An infrequent medical care*

Perception of fertility problems can be explored by distinguishing mothers that finally received medical treatment (minimal or significant) and those who did not, in order to carry a more “objective” approach of fertility problems (Table 2).

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<sup>6</sup> “Sterility” in the medical acceptance means total inability to conceive. We chose intentionally to use this term of “sterility”, since it is the word used by women themselves as noticed during past interviews (Mazuy, 2006).

<sup>7</sup> The male age effect has been shown too, but it is still not as well established as the woman age effect (La Rochebrochard *et al.*, 2003).

**Table 2: Perception of fertility problems, use of medical treatment and number of children among French mothers (n=1,950)**

Perception of fertility problems	Distribution	Mean number of children
No difficulties	68.2	2.1
Difficulties but no treatment	21.2	2.2
Difficulties with minimal treatments	7.0	2.2
Difficulties with significant intervention	3.6	1.7

*Source* : Ined-Insee, Erfi-GGS1, 2005

*Field* : mothers between 25 and 49 years old in 2005

Among mothers who declared having encountered problems with fertility, a high proportion (67%) did not have any medical treatment. Therefore, in most cases, the perception of fertility problems does not have medically objective manifestations as measured by medical treatment seeking. In the context of widespread assisted reproductive techniques, one may assume that couples tend to rapidly seek medical help. However, our results show that “only” 10.6% of mothers declare having used medical treatment during their lives and that a great proportion of mothers who declared fertility problems never received medical treatment. It would be interesting to explore if these mothers have had a medical consultation for infertility. However a French study observed that the cumulative probability of medical consultation for infertility among women who have no child is only 45% after 12 months of trying to conceive and 75% after 24 months (Moreau *et al.*, 2008). The frequency is even lower among women having children. Such French estimates are in accordance with those published in developed countries: around 56% of couples seek medical help after one year of trying to conceive (Boivin *et al.*, 2008). Therefore, among medically infertile couples, only half of couples have a medical consultation for infertility.

In addition to this “objective” medical approach, we also developed an “objective” demographic approach by estimating the mean number of children among mothers who declared (or not) fertility problems and medical treatments for infertility (Table 2). Only mothers who had significant medical intervention have less children than others ( $p < 0.0001$ ). On the opposite, mothers who had minimal medical treatments and mothers who declared fertility problems without any treatment have the same number of children than mothers

declaring no fertility problems. Using the number of children to define the “objective” way to consider fertility problems, this category concerns 3.6% of mothers.

***Fathers declare fewer fertility problems than mothers***

The declaration of fertility problems by fathers and by mothers are reported in Table 3: 20.5% of fathers declared such difficulties *versus* 31.8% of mothers ( $p < 0.0001$ ). Therefore, mothers declared a level of fertility problems that is 1.6 times higher than fathers. The greater the “objective” evidence for fertility problems, the more the gap between mothers and fathers estimations shrinks: the ratio is 1.63 for fertility problems without medical treatment, 1.43 for problems with minimal medical treatment and 1.38 for significant medical intervention. To conclude, the perception of fertility problems is much more frequent among mothers than among fathers, in accordance with the hypothesis of a stronger pressure to conceive among women than among men. Gender differences tend to decrease, but not disappear, when considering the more “objective” indicator of infertility.

**Table 3: Perception of fertility problems among mothers and fathers  
(n=3,267)**

Fertility problems	Total (n=3,267)	Fathers <sup>(a)</sup> (n=1,317)	Mothers <sup>(b)</sup> (n=1,950)	Ratio (b/a)
No difficulties	73.3	79.5	68.2	0.9
Fertility problems including:	26.7	20.5	31.8	1.6
<i>no treatment</i>	17.5	13.0	21.2	1.63
<i>minimal treatment</i>	6.1	4.9	7.0	1.43
<i>significant intervention</i>	3.1	2.6	3.6	1.38

*Source* : Ined-Insee, Erfi-GGS1, 2005

*Field* : mothers and fathers between 25 and 49 years old in 2005

In conclusion, when considering our “objective” analysis of fertility problems and the differences between mothers and fathers declarations, we concluded that the group with significant medical intervention is specific among parents having declared fertility problems: it is the only group where the fertility is lower (less children) and in this group mothers and fathers declarations are closer.

#### **4. Perception of fertility problems and the social norms effect**

In this second analysis section, we explored factors associated with perception of fertility problems and with use of medical treatment.

In the above section, we showed that the significant medical intervention group was probably specific regarding infertility. Thus, we assumed that in order to explore factors associated with perception of fertility problems it would be more pertinent to exclude this specific group (factors associated with this group could be different from those associated with the group of parents declaring fertility problems without using significant medical treatment). Analysis of factors associated with risk of declaring fertility problems has therefore been carried out among parents declaring no fertility problems or problems with no treatment or with minimal treatments. Analysis is presented separately for mothers (Table 4) and for fathers (Table 5) as there may be gender dependant effects.

For the same reason, we chose to explore risk of using medical treatment by considering only significant medical intervention. For this analysis, mothers and fathers were considered together (Table 6) since: (1) the number of respondents is too small to carry out gender-separated analysis, and (2) the declarations of mothers and fathers are more similar in this group.

Factors explored in our analysis are presented in the box below.

**Box 1 : Variables for univariate and multivariate analysis**

*Age:*

Age of parents is calculated by taking the difference between the year 2005 (the year of the survey) and their year of birth.

*Number of children:*

Number of biological and adopted children.

*Study duration:*

We distinguish three groups: short, medium and long, that were calculated in reference to the average duration of study in each birth cohort (Robert-Bobée and Mazuy, 2005).

*Country of origin:*

“France” refers to metropolitan France, “abroad” combines all others countries, in addition to French overseas regions.

*Regional Fertility Level:*

French territory is separated in two parts in regard to fertility rates: the North of the country has traditionally high fertility rates, whereas the south of the territory has lower fertility rates (Daguet, 2005). Low fertility levels correspond to rates that were below the national fertility rate. High fertility corresponds to rates above the national fertility rate. The area of Paris is specific on several aspects that can lead to different family values and attitudes : people give value to their career, the risks of couples’ break-up are high, housing problems can lead to lower fertility enlargement probabilities for people who have already children, all factors that can weaken pressure to conceive and fertility difficulties perception. We thus distinguish the Region of Paris.

*Profession*

We used the French official nomenclature (“PCS”) in 8 groups (first level of aggregation).

When analysing risk of the perception of fertility problems among mothers (Table 4), three factors are significantly associated with this risk in the unadjusted analysis: blue collar workers, mothers living in “high” fertility rate areas and mothers born in France more often declared fertility problems. Thus, the level of the perception of fertility problems is higher among mothers who traditionally have more children (blue collar workers and mothers from

“high” fertility areas). These mothers may feel a higher social pressure to conceive. Moreover, perception of fertility problems appears to be a “French” phenomenon, as mothers who were born in France (who were entirely socialized in the country) more often declared fertility problems than mothers born abroad<sup>8</sup>, where birth planning and medical care may be less important. In the adjusted analysis, only one variable was significantly associated with the perception of fertility problems: the regional fertility level. The social context (defined by the level of fertility, which is an indicator of the social pressure to conceive) appears to be the most important factor associated with the perception of fertility problems among mothers.

When analysing risk of the perception of fertility problems among fathers (Table 5), only one factor is significantly associated with this risk in the unadjusted analysis: fathers with two children declared more often fertility problems. In the multivariate analysis, the same results are observed but “never working men” also declared more fertility problems. Unemployed fathers are a very specific group. They may have serious health troubles and be excluded from both the working and marital markets, and therefore may also feel insecure regarding their ability to have children. However this group represents only a very small fraction of fathers (3%) in our study and we should maybe not pay a too strong attention to this result. Globally, perception of fertility problems appears to be homogeneous among fathers and is not related to factors associated with the social pressure to conceive.

When analysing the risk of using significant medical intervention among all mothers and fathers (Table 6), four factors are associated with a high risk of recourse: being a women, being older, having only one child and having never worked. The gender effect may be linked to more complete declaration of significant medical intervention among mothers than among fathers or to an over estimation of medical treatment seeking among mothers. Significant medical intervention is usually done after several years of infertility, explaining the age effect (see Table 6). Moreover, people who encountered strong fertility problems have less children (as already noticed in Table 2), making the association with number of children effect logical (see Table 6). The group of never-working parents is a very specific group as noted in the analysis concerning fathers. Significant medical intervention does not vary among low and high fertility rate areas. Finally, mothers and fathers who belong to lower social class appear less often have significant medical intervention (association not statistically significant in the

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<sup>8</sup> Almost 54% of fathers and mothers born abroad were born in Africa (35.6% in the Maghreb region and 18.1% in the rest of Africa), 37% were born in Europe and almost 9% in another continent. Origins of men and women born abroad are the same.

multivariate analysis). Previous studies (Tain, 2003) showed that concerning *in vitro* fertilization, women of lower social class tend to carry out treatment longer than women of higher social class in France (when medical treatments for infertility, even *in vitro* fertilization, are reimbursed by the French social security system).

**Table 4: Factors associated with perception of fertility problems among mothers who did not used significant medical intervention ( $n=1,888$ )**

	Prevalence of the perception of fertility problems (%)	Unadjusted		Adjusted	
		OR	95% IC	OR	95% IC
<b>Age</b>					
25-29	24,4	0,70	[0,46 - 1,09]	0,70	[0,45 - 1,09]
30-34	31,5	1		1	
35-39	29,4	0,90	[0,66 - 1,24]	0,90	[0,65 - 1,25]
40-45	30,0	0,93	[0,68 - 1,28]	0,91	[0,66 - 1,26]
45-49	28,6	0,87	[0,63 - 1,20]	0,86	[0,62 - 1,19]
	$p=0,6038$				
<b>Number of children</b>					
1	26,9	0,89	[0,69 - 1,15]	0,95	[0,73 - 1,24]
2	29,3	1		1	
> 2	31,4	1,11	[0,87 - 1,41]	1,07	[0,83 - 1,38]
	$p=0,2879$				
<b>Study duration</b>					
Short	31,4	1,21	[0,93 - 1,56]	1,03	[0,77 - 1,39]
Average	28,6	1,06	[0,81 - 1,38]	0,97	[0,73 - 1,30]
Long	27,4	1		1	
	$p=0,3054$				
<b>Country of origin</b>					
France	30,1	1		1	
Abroad	23,2	0,70	[0,50 - 0,98]	0,73	[0,51 - 1,03]
	$p=0,0379$				
<b>Regional fertility level</b>					
Paris region	22,8	0,58	[0,43 - 0,78]	0,64	[0,60 - 0,95]
« Low » fertility rate area	27,7	0,75	[0,60 - 0,94]	0,75	[0,47 - 0,88]
« High » fertility rate area	33,8	1		1	
	$p=0,0006$				
<b>Profession</b>					
High professional status	26,8	1		1	
Medium professional status	26,3	0,97	[0,62 - 1,52]	0,89	[0,56 - 1,40]
Low professional status	29,5	1,14	[0,75 - 1,73]	1,03	[0,65 - 1,63]
Manual laborers	38,5	1,71	[1,02 - 2,87]	1,50	[0,85 - 2,64]
Farmers, Self employed	25,8	0,95	[0,49 - 1,82]	0,84	[0,43 - 1,64]
Never working women	30,5	1,19	[0,75 - 1,89]	1,14	[0,70 - 1,87]
	$p=0,1394$				

Source: Ined-Insee, Erfi-GGS1, 2005

Field: mothers between 25 and 49 years old who did not used "significant" medical treatment

Note : The model was tested among mothers aged 30 to 49 years old. Same results were obtained.

**Table 5: Factors associated with the perception of fertility problems among fathers who did not use significant medical intervention ( $n=1,281$ )**

	Prevalence of the perception of fertility problems (%)	Unadjusted		Adjusted	
		OR	95% CI	OR	95% CI
<b>Age</b>					
25-29	13,0	0,63	[0,33 - 1,19]	0,70	[0,37 - 1,35]
30-34	19,2	1		1	
35-39	17,1	0,87	[0,58 - 1,30]	0,86	[0,57 - 1,29]
40-45	21,3	1,14	[0,77 - 1,69]	1,11	[0,74 - 1,67]
45-49	17,5	0,89	[0,59 - 1,36]	0,89	[0,57 - 1,38]
	$p=0,2973$				
<b>Number of children</b>					
1	15,1	0,65	[0,47 - 0,89]	0,66	[0,47 - 0,91]
2	21,6	1		1	
> 2	17,4	0,76	[0,54 - 1,07]	0,80	[0,56 - 1,14]
	$p=0,0211$				
<b>Study duration</b>					
Short	16,7	0,89	[0,64 - 1,23]	0,76	[0,52 - 1,11]
Average	20,9	1,17	[0,83 - 1,66]	1,12	[0,77 - 1,63]
Long	18,4	1		1	
	$p=0,2397$				
<b>Country of origin</b>					
France	19,1	1		1	
Abroad	14,5	0,72	[0,49 - 1,08]	0,72	[0,47 - 1,08]
	$p=0,1083$				
<b>Regional fertility level</b>					
Paris region	17,0	0,85	[0,68 - 1,21]	0,92	[0,62 - 1,38]
Low fertility rate area	17,9	0,91	[0,58 - 1,26]	0,88	[0,65 - 1,18]
High fertility rate area	19,4	1		1	
	$p=0,6641$				
<b>Profession</b>					
High professional status	17,6	1		1	
Medium professional status	19,3	1,12	[0,71 - 1,78]	1,10	[0,69 - 1,77]
Low professional status	14,9	0,82	[0,46 - 1,46]	0,89	[0,49 - 1,62]
Manual laborers	18,8	1,09	[0,71 - 1,66]	1,24	[0,76 - 2,02]
Farmers, Self employed	16,5	0,93	[0,53 - 1,63]	0,97	[0,53 - 1,76]
Never working men	27,5	1,78	[0,84 - 3,76]	2,39	[1,06 - 5,36]
	$p=0,4789$				

Source: Ined-Insee, Erfi-GGS1, 2005

Field: fathers between 25 and 49 years old who did not have significant medical intervention

Note : The model was tested among fathers aged 30 to 49 years old. Same results were obtained.

**Table 4: Factors associated with use of “significant” medical treatment among mothers and fathers (n=3,267)**

	Heavy medical treatment (%)	OR	Unadjusted 95% CI	OR	Adjusted 95% CI
<b>Sexe</b>					
Men	2,6	1		1	
Women	3,6	1,41	[0,94 - 2,11]	1,83	[1,16 - 2,89]
	<i>p=0,0987</i>				
<b>Age</b>					
25-29	0,9	0,35	[0,09 - 1,40]	0,26	[0,06 - 1,05]
30-34	2,5	1		1	
35-39	4,0	1,66	[0,89 - 3,09]	1,96	[1,04 - 3,68]
40-45	3,4	1,41	[0,74 - 2,67]	1,91	[0,99 - 3,69]
45-49	3,3	1,36	[0,71 - 2,61]	1,94	[0,99 - 3,82]
	<i>p=0,1014</i>				
<b>Number of children</b>					
1	5,2	2,22	[1,43 - 3,46]	2,79	[1,78 - 4,40]
2	2,4	1		1	
> 2	2,0	0,81	[0,45 - 1,46]	0,88	[0,48 - 1,60]
	<i>p&lt;0,0001</i>				
<b>Study duration</b>					
Short	2,3	0,56	[0,35 - 0,91]	0,66	[0,38 - 1,17]
Average	3,4	0,84	[0,53 - 1,35]	0,92	[0,56 - 1,54]
Long	4,0	1		1	
	<i>p=0,0546</i>				
<b>Country of origin</b>					
France	3,3	1		1	
Abroad	2,4	0,73	[0,39 - 1,38]	0,92	[0,47 - 1,79]
	<i>p=0,3253</i>				
<b>Regional fertility level</b>					
Paris region	2,9	0,93	[0,70 - 1,65]	0,75	[0,42 - 1,36]
« Low » fertility rate area	3,3	1,08	[0,53 - 1,64]	0,95	[0,61 - 1,48]
« High » fertility rate area	3,1	1		1	
	<i>p=0,8745</i>				
<b>Profession</b>					
High professional status	4,9	1		1	
Medium professional status	4,2	0,85	[0,46 - 1,55]	0,84	[0,45 - 1,56]
Low professional status	3,0	0,59	[0,32 - 1,11]	0,59	[0,29 - 1,21]
Manual laborers	2,9	0,58	[0,30 - 1,12]	0,87	[0,41 - 1,85]
Farmers, Self employed	2,3	0,45	[0,16 - 1,21]	0,51	[0,18 - 1,45]
Never working men and women	0,8	0,16	[0,04 - 0,56]	0,17	[0,04 - 0,62]
	<i>p=0,0209</i>				

Source: Ined-Insee, Erfi-GGS1, 2005

Field: mothers and fathers between 25 and 49 years old

## 5. Perspectives

In conclusion, we observed that perception of fertility problems is widespread in the French population, especially among mothers. One-third of mothers reported they have encountered fertility problems in their reproductive lives. This feeling is lower among fathers but still important: 21% of fathers declare that they have encountered fertility problems in their reproductive lives. However, significant medical intervention remains low: 3.6% according to mothers and 2.6% according to fathers.

We explored factors associated with the perception of fertility problems and with significant medical intervention. The perception of fertility problems does not seem to vary among fathers according to their sociodemographic characteristics (only fathers who have two children declare more fertility problems). For mothers, perception of fertility problems varies according to sociodemographic characteristics: fertility problems estimates are higher among mothers who traditionally have more children (especially among mothers living in French high fertility levels regions). This result supports our hypothesis of a social pressure to conceive, especially among women.

This analysis provides evidence to show that there is a widespread concern regarding fertility in French society. The high level of perceived problems might be linked to a social pressure to conceive, especially among women. However, further research should be carried out to study this phenomenon in depth. First of all, it is necessary to explore this question among the general population, including childless people. Second, it would be interesting to carry out qualitative interviews with women and men trying to conceive for different periods of time, in order to explore how they experience this period of time, what they understand to constitute fertility problems, what they think about medical treatment for infertility, and how their social contexts affect these different issues.

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